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ORIGINAL ARTICLES.

A CASE OF SPLENO-MEDULLARY LEUKEMIA; ONE OF LYMPHATIC LEUKEMIA OR SPLENIC ANEMIA; FOUR CASES OF PERNICIOUS ANEMIA.*

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The cases that I desire to show to-night are three, and in addition I desire to speak of three others. Of these six cases, representing various types of blood-disorder, the first is an instance of undoubted spleno-medullary leukemia. In the second the diagnosis lies between splenic anemia and lymphatic leukemia. The other four are cases of pernicious anemia.

Case I. The first case that I show is that of D. B., 33 years old, an unmarried carpenter of Wilmington, Del., who came under treatment October 7, 1896. His family history is negative. Two brothers and three sisters are in good health.

The patient has worked in the Wilmington Car Shops as a carpenter for about 16 years and has never been seriously ill. He has never had chills, fever or sweats, although he lived in a malarious district. He usually drank two or three glasses of whisky a day, and occasionally got drunk. There is no specific history. Five years ago he began to have indigestion, the result, as he supposed, of irregularity and haste in eating. He suffered from attacks attended with headache and vomiting, often accompanied by fever, and occurring at irregular intervals until the present trouble began. Five months ago he noticed a fulness of the abdomen, which he thinks has not increased in size since. He did not suffer from pain, but had a heavy dragging sensation in the epigastrium. He paid but little attention to his trouble and kept at work. About three months ago he was conscious of a gradually increasing weakness, accompanied by considerable dyspnea. His family physician, Dr. Brown, of Wilmington, treated him for several weeks, and then brought him to the Jefferson Medical College Hospital.

On the day of his admission an examination of his abdomen revealed an immensely enlarged spleen extending considerably beyond the median line and to about three inches below the umbilicus. His general condition was good, and he had kept at work up to the date of his admission. His tongue was only slightly coated, the bowels were regular, and the appetite fair. His urine was acid in reaction, the

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specific gravity 1024, and it contained neither albumin nor sugar. Microscopic examination yielded negative results. On examination on October 16, the ocular media and the fundus were found normal; the field for form and color was normal, and the veins were large and tortuous. There was no evidence of hemorrhage.

The patient was given increasing doses of Fowler's solution of arsenic until, at the end of a month, he was taking eight drops three times a day. He also received a dram of fluid extract of ergot thrice daily. On November 16, on account of gastric irritability, fifteen drops of Fowler's solution were given again daily by the rectum, the ergot being continued by the mouth. The arsenic was gradually increased until forty-one drops were given twice daily, still by the rectum. On December 7, the solution was increased to forty-five drops a day, in three doses, but on December 20, it was stopped on account of diarrhea. On the 21st, the patent was again given fifteen drops of the arsenic and a dram of ergot by the mouth daily, and these were continued until January 12, when I went on duty at the hospital. The administration of the ergot was then stopped, but the Fowler's solution was continued and was increased until the man was taking thirty-two drops daily. On the 20th, gastric disturbance again developed, and the arsenic was discontinued, but on February 2, it was resumed, but in smaller amounts. The examinations of the blood from the date of the man's admission to the present time having given the following interesting results:

Date.	Hemoglobin	Erythrocytes.	Leukocytes	Differential Count.
Sep 30, '96	28%	2,458,000	368,750	1 to 6. L 6 %, M,15%, P 60%, E 5%.
Oct. 2	25%	2,700,000	386,000	1 to 7.
" 16	28%	2,800,000	241,666	1 to 11.
" 26	40%	2,322,000	139,000	1 to 16 L 1%, M 28%, P 51%, E 4 My 3%
Nov. 8	45%	2,064,000	118,000	1 to 17.
" 20	50%	2,148,000	93,750	1 to 23.
Dec. 25	60%	3,600,000	217,190	1 to 17.
Jan. 9, '97	63%	4,000,000	60,000	1 to 68, L 4 %, My 4, P 67, E 10 M. 6.
Feb. 2	63%	4,000,000	19,000	1 to 210.
" 16	70%	4,100,000	80,000	

The Letter L stands for lymphocytes, M for mononuclear leukocytes, P for polynuclear or polymorphous leukocytes, and E, for eosinophiles, My. stands for myelocytes.

It will be seen, therefore, that at first the condition of the blood was bad, there being 368,750 white cells to 2,458,000 red. Megalocytes were present, and the lymphocytes were decreased in number. The number of polynuclear cells was about normal, and that of the mononuclear cells increased.

Physical examination of the patient on January 12, showed the spleen to be enlarged. At the present time it has decreased very much in size, and the man is almost well.

The second case presents a most interesting history. The patient was under my care for several months a year ago. At that time the splenic enlargement was very considerable, and there were areas in which loud anemic murmurs were heard. The man's color was sallow, and his eyes had that peculiar fatty, yellow appearance seen in some cases of pernicious anemia. He was admitted to the Jefferson Medical College Hospital on January 9, 1897, with the following history:

Case II. J. P., aged 24 years, is an unmarried barber. Both parents are dead, the cause of death not being ascertainable. One brother died in infancy, and one sister six or seven years ago of pulmonary tuberculosis. Two sisters are alive and well. The patient stated that he had never been in the habit of taking whisky, and that he had smoked only in moderation. He had measles at seven years of age, and an attack of influenza seven years ago that confined him to bed for four weeks. During a portion of this time he was delirious. In 1894, he states that he had a severe attack of bilateral pneumonia, but completely recovered in five weeks. In November of the same year, while employed as a miner, he lost his balance at work and rolled for a distance of about thirty feet, sustaining considerable injury to the head and neck. He was unconscious when picked up, but reacted speedily, and two weeks later resumed work.

On October 8, 1895, he was admitted to the Jefferson Medical College Hospital, relating that his illness began in July, 1895, with moderately severe pain beneath the left clavicle. This persisted here for three days, and then descended to the left hypochondriac region and the pain became in-

tense. A few days previous to the onset of pain, there had been noticed puffiness beneath the eyes and a decided swelling of the entire face. Profuse sweating occurred coincidentally with the pain, and the face become pale, and the pulse rapidly increased in frequency until it numbered 160 per minute. The respirations were embarrassed and the temperature was 100° F. There was complete loss of appetite and the bowels were constipated. The patient also states that he was unconscious for a period of three days. Loss of flesh and strength was marked, his weight diminishing from 130 to 116 lbs. He remained in bed for one month, and regained his weight; but the pain, varying in intensity, continued in the region of the spleen. There was a sense of weight in this region which became more and more pronounced, particularly when the body was jarred.

When admitted to the hospital the most noticeable feature of the case was the extreme pallor of the face. The conjunctivæ were tinged with yellow, and the complexion was sallow. The lips, gums and tongue were bloodless. The tongue was clean, but flabby, the appetite fairly good, the bowels regular, the pulse 94, the respirations 22, and the temperature 102.4° F. Examination by palpation showed a large mass occupying the left hypochondriac region, and extending back into the lumbar region. Auscultation of the heart revealed an anemic murmur at the base. A venous hum was heard in the neck.

The urine was amber-colored, acid in re-action, and of a specific gravity of 1025. There was no albumin or sugar; urea was present in the proportion of four grains to the ounce. The microscope showed red blood-cells in abundance and a few granular leukocytes and epithelial cells.

On October 30, 1895, an ophthalmoscopic examination showed numerous hemorrhages throughout the retina of each eye. These were old and irregular in outline, and especially abundant near the discs. The veins were large and tortuous. On October 21 and 23, the patient had several slight attacks of epistaxis. He left the hospital on December 23, promising to return to the Out-Patient Medical Department to have his blood-counts made. On February 4, 1896, he returned, complaining of hematuria. He was slightly paler, but was in about the same condition as when he left the hospital. He now remained in the ward until July 6, 1896, when he was discharged, against the wishes of the physician in charge, but slightly improved; and went to work as a barber. He again returned to the hospital on January 9, 1897, and said that he had felt very well all summer until September, when he was put on very poor diet, consisting of tea, coffee, rye-bread and a little meat at noon. He gradually became weaker until New Year's Day, but still kept at work, complaining of general weakness, headache when in the erect position, shortness of breath, and swelling of the feet and limbs, especially after standing. He was brought to the hospital in the ambulance.

On admission to the wards his temperature was 101° F., the pulse 130, and the respirations 24. On January 13, 1897, when I again went on duty, examination disclosed murmurs in the carotids. The anemic murmurs were not as marked as they were last year. The man had severe bronchitis, as a result of exposure. The degree of splenic enlargement was very considerable. On February 20 and 21 the patient had attacks of epistaxis. He was ordered fifteen grains of ferratin three times a day.

Examinations of the blood have given the following results:—

DATE.	HEMOGLOBIN.	ERYTHROCYTES.	LEUKOCYTES.	
Oct. 9, '95	30%	2,060,000	8,000	
" 12,	30%	1,792,000	5,000	
" 15,	20%	1,400,000	9,000	
" 17,	20%	1,400,000	9,000	
" 21,	14%	1,100,000	6,000	
" 25,	18%	1,000,000	7,000	
Nov. 4,	23%	1,300,000	5,000	
" 12,	25%	1,500,000	6,000	
" 21,	30%	1,600,000	6,000	
Dec. 7,	32%	1,800,000	7,000	
" 25,	30%	1,950,000	5,000	
Jan. 20, '96	30%	2,152,000	6,000	
Feb. 12,	38%	2,545,000	8,000	
" 29,	42%	2,580,000	7,000	[P 8%, E 3%,
Mar. 16,	35%	2,000,000	6,000	L 84%, M 4%.
Apr. 1,	35%	2,180,000	5,000	No alteration
" 23,	38%	2,000 000	5,000	in the shape of
" 29,	38%	1,992,000	6,000	the erythrocytes.]
Jan. 11, '97	30%	2,000,000	4,500	
" 30,	48%	2,800,000	4,000	
Feb. 5,	35%	2,500,000	5,000	
" 16,	33%	2,024,800	6,200	

The large proportion of lymphocytes (84 per cent.) in this case would apparently make it an instance of that somewhat rare type of leukemia, called lymphatic leukemia, but there is an entire absence of enlargement of the lymph-glands and, what is more important, the increase in lymphocytes is purely relative, the total number of white cells being actually lower than normal. Aside from this state of the white blood-cells, the case might well be classed as one of what has been called pure splenic anemia, or splenic pseudo-leukemia. Thus, we find, in the enlarged, and at times painful, spleen, the fact that the disease is commonly found at this patient's time of life and in his sex, and that the anemic fever has also been present. Further than this, in splenic anemia we often have a decrease in the number of red cells to one-half, with a similar falling-off in hemoglobin. Banti has regarded this state as a purely splenic form of pseudo-leukemia, or Hodgkin's disease.

The third case is one of true pernicious anemia, which may, perhaps, be placed among the few that have been reported as cured. The patient certainly shows a wonderful improvement, and one that is more marked than is usually met with in cases of this disease. He is before you, and you can at a glance perceive his ruddy hue. His history is as follows:

Case III. F. ——— R. ———, aged thirty-nine years, an unmarried lumberman, born in Ireland, was admitted to the Jefferson Medical College Hospital on May 11, 1894. His parents died at an advanced age, the cause of death not being known to him. They had always been very healthy. The patient is one of nine children, and, so far as is known, all of his brothers and sisters have always been in good health. He has had some of the diseases of childhood, but later in life he was exceptionally strong and healthy, having suffered from no sickness of any kind until about the age of twenty, when, without cause, he had an attack of serous diarrhea, which lasted all summer. The diarrhea disappeared during the winter, but has recurred every summer since the first attack, with occasional outbreaks, however, also during the winter months. Fourteen years ago, he had croupous pneumonia. He was sick three weeks, and recovered completely. After this he had good health, excepting for the diarrhea mentioned, until April, 1893, when he began to have nausea, with occasional attacks of vomiting, irrespective of the taking of food. The vomited matter consisted usually of greenish mucus or fluid, but was never large in amount. During the worst periods of the attacks he would vomit two or three times daily. His appetite was poor, and he noticed that his skin was quite yellow. The diarrhea and vomiting continued to get worse, and in May, 1893, he entered the Williamsport Hospital, where he remained four months under treatment for "some disease of the liver." After leaving the hospital he felt better, the vomiting and diarrhea having ceased, and he gained considerably in weight, but he remained very weak. He worked for a while driving a team, but this work soon became too hard for him; and in April the old trouble returned as before, and continued to grow steadily worse. He decided to come to Philadelphia for treatment, and was admitted to Jefferson Hospital on May 11, 1894.

On May 18, 1894, his condition was as follows: He presented a markedly anemic appearance, the skin having a slightly yellowish tinge. The lips and ears were almost bloodless, and the tongue pale, but clean. His appetite was fair and his bowels quite loose. He had been gradually losing weight. His temperature ranged from 99° to 101° F., the respirations from 24 to 30 and the pulse from 68 to 80.

An ophthalmic examination showed that his pupils responded to light and in accommodation. The conjunctivæ were infiltrated with lemon-yellow fat. There were numerous fresh and old hemorrhages into the retina. The discs were anemic, and the veins and arteries could scarcely be distinguished on account of the pallor of the blood. A chest-examination showed the skin to have a light-yellow tinge, with extreme pallor and superficial edema.

The respiratory movement was good and there was slightly increased vocal fremitus on the right side. Auscultation and percussion yielded negative results. The impulse of the heart could scarcely

be felt. The apex-beat was normal in position, but it could only be determined by auscultation. There was no increase in the area of cardiac dulness. Auscultation revealed a soft systolic murmur, heard best at the base and at the second costal cartilage at the left of the sternum; it was not well transmitted into the neck. The liver was normal in size and was not palpable. There was no increase in the area of splenic dulness. The abdominal examination was otherwise negative. The feet were slightly edematous. The urine was shown to be acid in reaction and light-yellow in color. It contained no albumin or sugar. The specific gravity was 1,014. Repeated examinations of the feces did not reveal the presence of parasites of any description. The sputum examination was negative.

The blood-examinations gave the following results:

Date.	Hemoglobin	Erythrocytes.	Leukocytes.	Vol. Pr ct.	
May 14, '94	15%	973,000	7,000	25	Microcytes. Macrocytes. Poikilocytes.
June 14, '94	10%	664,000	5,000	14	
July 9, "	50%	2,500,000	5,000	50	Almost all corpuscles are normal.
July 24, '94	55%	2,600,000	8,000	52	
Aug. 14, "	55%	2,650,000	9,275	53	
Sept. 12, "	60%	3,800,000	10,000	76	

The patient was discharged from the hospital September 13, 1894, very much improved in health, his symptoms having all disappeared. He then went to work in the pine forests of Bradford county, Pa., and his old trouble gradually returned. He was again admitted to the hospital August 28, 1896. He was now very weak and anemic, and had diarrhea and vomiting, with pain in the epigastrium. He also had considerable cough, with clear, frothy, expectoration. The urine was acid in reaction and had a specific gravity of 1,022. No albumin or sugar was present. The ophthalmic report on September 22, 1896, was as follows: Pupillary reaction, normal; conjunctivæ, pale; media, clear; nerve, white; veins, tortuous; retina apparently normal in both eyes. Vision O. D. 6-9; O. S. 6-30. In the right eye no hemorrhages had occurred; the veins were full, and there was some chromatic disturbance. The left eye showed a round disc, and was very pale, with full veins, and a patch of choroiditis near the nasal side of the disc. Following is the record of the blood-count since the patient's last admission:

Date.	Hemoglobin.	Erythrocytes.	Vol. Per cent.	Leukocytes.
Sept. 1, '96	35	1,180,000	23	5,000
" 7,	35	1,150,000	23	5,000
" 14,	26	1,109,000	23	4,000
" 21,	26	941,000	20	3,120
" 22,	23	886,000	20	3,800
" 23,	25	1,200,000	22	5,000
" 24,	28	1,045,000	21	3,125
" 28,	26	1,333,250	26	6,250
Oct. 8,	30	1,500,000	31	3,750
" 19,	36	1,233,000	26	9,275
" 29,	53	1,600,000	35	9,375
Nov. 17,	65	1,400,000	30	10,937
Dec. 4,	80	3,960,000	78	14,000
Jan. 5, '97	65	3,200,000	65	9,375
" 16,	60	3,080,000	62	9,375
Feb. 5,	85	4,000,000	80	24,000
" 18,	90	4,360,000		10,900

Under full doses of arsenic or iron sulphate the number of red blood-corpuscles has increased from 886,000, on September 22, to 4,360,000 on February 18.

CASE IV. The fourth case is also one of pernicious anemia, the patient being temporarily better, but not so markedly so. S. S. D., aged 61, consulted me January 30, 1895, stating that for two months he had not been feeling well. His stomach and bowels were out of order, his fingers and feet were cold, but he did not cough, there was no mucus in his stools, and his sleep was not disturbed. Examination of his urine gave negative results. The condition of general debility improved under treatment, and I did not see him again until the twenty-fifth of the following October, an interval of nearly nine months, when he came back complaining of slight debility. I saw him again on March 17, 1896, when he complained of gastric disturbance, for which I gave him condurango. I noticed that his face was a little drawn to the right side, and that he appeared to be markedly anemic, but he stated that he had always had a chalky color and was naturally pale. Ten days later he was somewhat better, and on June 25 he reported himself as being very much improved. I did not see him again until November 12, 1896, when he presented himself in a state of advanced anemia. There was a faint mitral systolic

murmur, and some dyspnea on exertion, and his fingers were a little blue. The analysis of his urine was negative. Three weeks later he came to my office again, complaining of very great shortness of breath, the dyspnea being so marked as to seriously incommode his movements. At this time an examination of his blood gave the following results: Hemoglobin, 30 per cent.; corpuscles, volume 25 per cent.; number, 1,332,000; leukocytes, 5,000; lymphocytes, 10 per cent.; mononuclear leukocytes, 30 per cent.; polynuclear leukocytes, 55 per cent.; eosinophiles, 5 per cent. The blood also showed marked poikilocytosis, and microcytes and macrocytes were present, the latter being very large. There were also numerous normoblasts and gigantoblasts. Microscopically the appearance of the blood was slightly paler than normal. It was quite thin and did not coagulate readily. The patient was immediately put upon iron peptomanganate and ascending doses of arsenic. Ten days later the dyspnea was still present, but sleep was better. I then ordered a wine-glassful of maltale twice a a day. Examination of the blood at this time showed: hemoglobin 28 per cent; red corpuscles, volume 30 per cent.; number, 1,060,000; white cells, 8,000; lymphocytes, 16 per cent.; mononuclear leukocytes, 25 per cent.; polynuclear leukocytes, 59 per cent.; oasinophiles, none. The difference in the count and in the results from the hematokrit seemed to be caused by the megalocytes; otherwise the condition of the blood was practically the the same as at the previous examination in regard to poikilocytes, microcytes and megalocytes.

On January 23, the patient expressed himself as feeling much better, and he looked much better. At this time the hemoglobin was 35 per cent.; the red corpuscles, volume, 33 per cent.; number, 1,520,000; the white cells, 6,000; the lymphocytes, 16 per cent.; the mononuclear leukocytes, 32 per cent.; the polynuclear leukocytes, 52 per cent.; and there were no eosinophiles. There were only a few poikilocytes and megalocytes. It is noted that the blood showed a marked improvement over previous examinations.

On January 6,'97, the examination resulted as follows: Hemoglobin, 37 per cent.; red cells, volume 42 per cent.; number, 2,212,000; leukocytes, 6,300; lymphocytes, 20 per cent.; mononuclear leukocytes, 16 per cent.; polynuclear leukocytes, 60 per cent.; eosinophiles, 4 per cent. Microscopic examination revealed a few microcytes and macrocytes and only an occasional poikilocyte.

On February 2, 1897, the man reported that he had gained eight pounds since December 16. The liver and spleen were still normal in size, the appetite was good and the bowels regular. He slept well, did not cough, and there was much less shortness of breath. He had taken the maltale regularly, but during his entire illness he had never been able to take more than six or eight drops of Fowler's solution of arsenic a day, with pepto-mangan, without developing gastric irritability. He has had massage twice a week for six weeks. An examination of his blood at this date showed: Hemoglobin, 45 per cent.; red cells, 2,400,000; volume, 46 per cent.; leukocytes, 10,000; lymphocytes, 5 per cent.; mononuclear leukocytes, 25 per cent.; neutrophile leukocytes, 70 per cent.; eosinophiles, 5 per cent. Microscopic examination shows a few poikilocytes and microcytes.

On February 24, 1897, the man reported that he was improving in every way. An examination of his blood gave the following results: Hemoglobin, 35 per cent.; erythrocytes, 2,250,000; leukocytes, 12,500. There were present a few microcytes, rather numerous macrocytes, and a considerable number of poikilocytes.

This case showed marked improvement on active hematic treatment. Whether or not the improvement will persist remains to be seen.

CASE V. The fifth case, also one of pernicious anemia, is that of F. L., a carpenter, aged forty-four years, born in Pennsylvania, and admitted to the Jefferson Medical College Hospital with the following history: His father had died of alcoholism; his mother had some nervous affection. His brothers and sisters were all living, and healthy, in his opinion, but cross-examination showed that one sister was decidedly pale, and had white patches

in the skin such as he had. The patient has had the ordinary diseases of childhood, and malarial fever eleven years ago, which lasted six months. Otherwise he has always been strong and healthy, until four years ago, when he began to suffer from weakness, but was not confined to bed. He has never lost flesh, does not cough or have sweats, and has no alcoholic or specific history. The appetite was good, the bowels slightly constipated. The urine had a specific gravity of 1018, was acid in reaction, and did not contain albumin or sugar. The blood-examination on March 15, 1895, showed the hemoglobin to be 17 per cent., and the number of red corpuscles 1,340,000, with slight poikilocytosis, and megalocytes and microcytes in considerable number. Only about 5 per cent. of the red corpuscles were normal. The white blood-corpuscles were normal, and there were no malarial organisms. Inspection showed a well-nourished man, intensely pale, the pallor being of rather a yellowish hue. The subcutaneous tissues were well-filled with fat. The heart and lungs were normal, except that the heart-sounds were feeble. The spleen was not enlarged, and the area of liver-dulness was normal. There was no abdominal disease, but deep palpitation in the region of the head of the pancreas revealed the presence of a small swelling. The man was placed upon ascending doses of Fowler's solution of arsenic and reduced iron given three times a day, the latter being given in ascending half-grain doses.

On March 26, 1895, the hemoglobin was 10 per cent., and the red blood-corpuscles numbered 760,000 to the cubic millimeter. On the 29th the hemoglobin was 10 per cent., and the red blood-corpuscles 548,000. On April 1st the hemoglobin was 8 per cent., the red blood-corpuscles 520,000. On April 5th the hemoglobin was 8 per cent., the red blood-corpuscles 454,000.

The patient died on April 6th. The *post-mortem* examination showed well-marked *rigor mortis*, an abundance of subcutaneous fat, and the muscles well preserved and very red in color. The bone marrow was chocolate-colored. There was a small, clear effusion in the right pleural cavity. The left pleura was universally adherent, and the cavity contained six ounces of clear fluid. The pericardium contained six ounces of clear fluid. The right ventricle was flabby and relaxed, while the left was firm and contracted. There were no clots in either ventricle or in the vena cava. A large chicken-fat clot was found in the pulmonary artery. The aortic orifice was patent; the mitral leaflets were slightly thickened. The cardiac muscle was pale, flabby, soft and cloudy. The pericardial fat showed a tendency to invade the heart muscle. The aorta was pale and unusually soft and elastic, and was pared both longitudinally and transversely with little difficulty. The heart weighed fourteen ounces. The right lung showed extensive gelatinous edema. The peribronchial glands were pigmented, and a few of them were calcareous. The bronchi was normal.

The sixth case resulted in recovery, although it was apparently one of pernicious anemia.

Case VI. J. D., aged forty-four, a coal-miner, was admitted to the Jefferson Medical College Hospital January 31, 1895. He related that his father had died of enteric fever. His mother was living and well. He had had the ordinary diseases of childhood, and had always been healthy until three years before, when he began to have a sensation of numbness in his fingers. Four months before he had noticed a similar numbness in the feet and legs, with a sensation of fulness in the stomach, and a chilly sensation in the lumbar region. He was markedly anemic. His urine had a specific gravity of 1020, and was acid in reaction; it contained no albumin or sugar.

On March 13, 1895, an examination of his blood showed poikilocytosis, the corpuscles varying very much in shape. There were numerous macrocytes and microcytes. There was a slight diminution in the number of white blood-corpuscles. The hemoglobin was 45 per cent., and the red blood-corpuscles numbered 2,500,000. The patient was given ascending doses of Fowler's solution of arsenic, with half a grain of Quevenne's iron three times a day. On March 30 the hemoglobin was 58 per cent., and the red corpuscles 3,320,000,

with very few poikilocytes. On April 12 the hemoglobin was 80 per cent., the red corpuscles 4,060,000. On April 23 the hemoglobin was 80 per cent., the red corpuscles 4,400,000. The hematokrit showed a volume of 94 per cent.

I have reported these cases because it seems to me that each of them possesses considerable clinical interest. The first case shows very great improvement, and a decrease in the number of white cells to a remarkable degree. The second case, as already pointed out, shows a great increase in lymphocytes, yet no actual increase in white cells, in this respect resembling lymphatic leukemia, and yet not following its usual blood-count.

The third case is extremely interesting, as illustrating apparent cure in pernicious anemia. There is certainly great improvement, although clinical experience shows that a fatal relapse is to be expected.

The fourth case, also one of pernicious anemia, likewise shows very great improvement, sufficient to justify hopes of cure if it had not already come to a standstill, and we did not know the history of pernicious anemia so far as its progress is concerned.

The fifth case is an instance in which the disease pursued a rapid and fatal course, with very characteristic *ante-mortem* and *post-mortem* manifestations.

Finally, the sixth case illustrates how a patient, apparently in the early stages of pernicious anemia, can either be cured or have the disease arrested, although as it is a hospital case I cannot vouch for the permanence of the recovery.

Burial Places and Cause of Death of Our Presidents.

1. George Washington died from a cold which brought on laryngitis; buried on his estate at Mount Vernon, Va.

2. John Adams died from senile debility; buried at Quincy, Mass.

3. Thomas Jefferson died from chronic diarrhœa; buried on his estate at Monticello, Va.

4. James Madison died of old age; buried on his estate at Montpelier, Va.

5. James Monroe died of general debility; buried in Marble Cemetery, New York city.

6. John Quincy Adams died of paralysis, the fatal attack overtaking him in the House of Representatives; buried at Quincy, Mass.

7. Andrew Jackson died of consumption and dropsy; buried on his estate, the Hermitage, near Nashville, Tenn.

8. Martin Van Buren died of catarrh of the throat and lungs; buried at Kinderhook, N. Y.

9. William Henry Harrison died of pleurisy, induced by a cold taken on the day of his inauguration; buried near North Bend, Ohio.

10. John Tyler died from a mysterious disorder like a bilious attack; buried at Richmond, Va.

11. James K. Polk died from weakness, caused by cholera; buried on his estate in Nashville, Tenn.

12. Zachary Taylor died from cholera morbus, induced by improper diet; buried on his estate near Louisville, Ky.

13. Millard Fillmore died from paralysis; buried in Forest Hill Cemetery, Buffalo, N. Y.

14. Franklin Pierce died of inflammation of the stomach; buried at Concord, N. H.

15. James Buchanan died of rheumatism and gout; buried near Lancaster, Penna.

16. Abraham Lincoln, assassinated by J. Wilkes Booth; buried at Springfield, Ill.

17. Andrew Johnson died from paralysis; buried at Greenville, Tenn.

18. Ulysses S. Grant died from cancer of the throat; buried in Riverside Park, New York city.

19. Rutherford B. Hayes died from paralysis of the heart; buried at Fremont, Ohio.

20. James A. Garfield, assassinated by Charles J. Guiteau; buried at Cleveland, Ohio.

21. Chester A. Arthur died from Bright's disease; buried in Rural Cemetery, Albany, N. Y.

REPORT OF A MIXED GROUP OF ABDOMINAL SECTIONS, WITH A DISCUSSION OF METHODS.*

JOSEPH PRICE, M.D., PHILADELPHIA.

My object in reporting a group of consecutive operations is to demonstrate, first, that gynecologic operations should be done for disease only; second, that if our simple tested methods are followed faithfully, and operations are completed, the mortality can be made uniformly low; third, that operations should not be delayed by the general practitioner.

It is of interest as well as of value to note, in an introductory way, what has been done, how it has been done, and what have been the results. Very much that is done now in abdominal surgery would not very many years ago have been regarded as criminal interference, and would have subjected the surgeon to civil or criminal prosecution. Now *not* to interfere would be construed by the advanced men of the profession, if not by the law, as gross ignorance or criminal neglect. These embarrassments and risks were faced by our few heroic pioneers, who did more, in facing and battering down the enmities and prejudices of the great body of the profession. The lines their hands drew we have followed, and have extended and broadened, but we have improved very little on what they did and the way in which they did it.

When we run our eyes along the lengthened and lengthening lines of surgical progress we feel a profound sense of gratification, of debt and gratitude to men of our own and other generations who have contributed to this progress. We have learned and unlearned much. We have very much yet to learn and to unlearn. Our differences are interesting and instructive. The sum of the results of earnest effort by the members of a profession marks the progress of that science. But some men have presented real achievements, to be refused recognition for ages, but we also know and regret that our attention is far too easily diverted from its necessary sober train by some enthusiast or speculator in some wondrous field of remedy. In no branch of human science or endeavor are these enthusiasts, these lineal descendants of Plato, so numerous as in surgery. They would effect grand revolutions in a day. In illustration, we need only refer to Apostoli and his disciples. The electrolysis rage spread over two continents. Many educated and sincere men adopted this mode of treatment, and, sad to reflect, the sequelæ of the epidemic still linger with a few of the profession. For a time it was claimed that almost every known trouble could be cured by electrolysis: fibroids, extra-uterine pregnancy, retroversion and prolapse, and many other diseases. The mania had its day—it came and passed as those things do which are without rational basis, which cannot, do not, withstand practical, scientific tests. Comparatively few can now be found following Apostoli's methods. The majority of his disciples have laid aside the little machines in which they invested some of their surplus, and with which they toyed with the maladies of suffering women, aggravating troubles in many instances, or nursing delusions of relief and cure. This matter is more serious than we are disposed to consider it. Our voices are influential. Let us make sure of the value of what we do and the way in which we do it.

Treatment by electricity furnishes only one of many instances of particular remedies or surgical procedures that fall short of their early promise, that do not permanently relieve or cure. The very names of the originators sink into obscurity or have only the unenviable distinction of being associated with an historic failure. Such experiments have a serious side. Many are the victims of delusive forms of scientific

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zeal. It is the patient who suffers, and not the experimenter. While it must be acknowledged that very much of our knowledge and our ability to treat and relieve human suffering has been the result of experiment, the experiments have been along legitimate channels, and by methods that entail no mischief. The tests are scientific. The motive of the experimenter should always be a purely scientific one, without the taint of any desire to associate his name with something new, to be an originator. It is not a fact that names record discoveries. There are names associated with surgical appliances and procedures that were in use before the claimants were born. Our science and art are made up of myriads of contributions, and it would be difficult to tell from whom they emanated. Use popularizes a discovery. Everything scientific or otherwise is tested by its utility, its facility of practical and successful use.

Generally, our departure from simple, easy, scientific and common-sense methods results in mischief. The varied and complex conditions with which we have to deal do not call so much for surgical genius as for surgical common sense. Skill and success in doing comes of doing. In surgery it is not safe to assume advanced theoretic positions on the mere faith that they will afterwards be confirmed. Such theories often lead to dangerous experimentation with human life.

In all surgical troubles, those that commonly possess minutiæ or detail should receive the closest attention. Little things become agencies working good or evil. Size often is given undue importance, while not infrequently it bears small relation to the seriousness of the trouble. The very minute may be the very dangerous. There should be special study of the pathology of intraperitoneal and pelvic disease, with a long apprenticeship in dispensary service. Where opportunities exist for careful study in the diagnosis of pelvic troubles, such diagnostic skill should always be attained before there is any attempt made in the surgical treatment of abdominal troubles.

In presenting a mixed group of operations, selecting from a series each of a hundred, about every known and established procedure was called into practice. At the present time, sections for suppurating forms of disease are most common, in excess of all others; fibroids and cystomata follow, and following in very close order come tubal pregnancy and appendicitis.

Surgeons are largely influenced in their methods of operation by their fancy and their ability to apply and perfect them. They resort to those in which they are the most deft in use, which bring them the best results. Many procedures have had a short life; for instance, the tying of the broad ligaments and their vessels.

In surgery, as in other things, we coin from our experiences our best lessons. My earlier experiences and my later ones have confirmed in me my conviction of the importance of drainage. It has had its advocates, and those denying its value, those indifferent to its use; and not a small number claimed that its use was evidence of imperfect, incomplete or bad surgery. Just now it would seem that all are drifting to its use. Those who were loudest in their condemnation of drainage are now loudest in its advocacy. Nothing so quickly drives men to the use of an expedient as failure without it. A few or many deaths set men down to sober reasoning; if not, patients and their friends will do the reasoning for them.

It has been claimed that drainage is not necessary in "ordinary" cases, owing to the absorbent power of the peritoneum to remove secretions. It requires more prescience than any of us possess to decide in many cases that the peritoneum will rid its cavity of the exuded fluids from broken-up adhesions. If the tube has no injurious effect, it is better to use it in every case than to risk non-absorption in a single case, which may have been thought to be "ordinary," but which has turned out the reverse. The question resolves itself into distinct propositions: First—Is there any danger from the retention of fluids in the peritoneal cavity? Second—Is the use of the drainage-tube a safe means of obviating these dangers? If the tube involves in its use an element of danger, what are the comparative dangers from its employment or its omission? That the peritoneum will, in many cases, relieve itself of exuded fluids, may be accepted as true. Experience has also

shown that when it refuses to do so unaided, the free use of salines often assists it, and cuts short an acute attack of peritonitis. Experience has also shown that this mode of treatment often fails, necessitating the re-opening of the abdomen, thorough irrigation and the secondary use of a drainage-tube, even though no pus has been discovered on the re-opening.

The fallacy in supposing an operation simple because no great adhesions have been involved, lies in the fact that great secretion can arise from small adhesion, and that exudation of blood, which seems nothing at the close of the operation, may, when the patient rallies from the shock of ether and of the operation, become very considerable. Does the use of the tube involve a question of danger? My answer is, were half the care used to keep the tube carefully cleaned, and to protect it from external contamination that characterizes the Gatling-gun warfare against germs supposed to enter through it, there would be little cause to fear it. If the tube is kept clean, if it is emptied often, it should be removed by degrees, commencing as soon as the discharge seems to be at a minimum, and in most cases no more irritation will be caused by it, or with it, than some inadvertence will explain. When an entire pelvis can be packed with lint to subdue hemorrhage, is it possible that a simple glass tube can cause such trouble as is frequently attributed to it? As to the use of the tube, my own experience teaches me that when kept clean, by frequently changing the cotton, and with careful attention to that part of the incision through which the tube is introduced, there is not the slightest danger of septic infection from its use.

This conclusion is reached after its application in extreme cases of pelvic adhesion, extra-uterine pregnancy, hysterectomy, pus-tubes, and (so-called) simple operations. I have never had a single case in which I could justly attribute unfavorable results to the use of the tube. On the contrary, I have seen more than one case in which its absence has been followed by mischief, which was relieved by its introduction. I have seen cases, too, in which I believe failure was due to its omission. Concomitant with drainage comes its adjunct, irrigation. It is of the greatest possible use to insure complete removal of *debris*, clots and shreds.

As to the use of solutions, they have fortunately had their day. Much of the intestinal mischief for which they were responsible will go unrecorded. As to the time for removal of the tube, nothing should influence this more than the nature and quantity of the discharge. When this is clear, sweet and scant, the indications are for removal. It has been held that the introduction of the tube delays union, and increases the danger of ventral hernia. This my own experience discredits. Ventral hernia, I believe, results in most cases, from two causes: First, a very long incision; and second, getting up too soon and abandoning the abdominal support too early.

A short incision, and due care to keep the patient in bed and at rest, a sufficient time for the margins of the incision to organize and consolidate, together with abdominal support through a period of months, will obviate this trouble.

There is much mischief worked by the use of certain words. They have a vicious significance for students and beginners. Among them are such as "hopeless," "inoperable." They express surgical cowardice, and are responsible for the death, or long-continued suffering of many noble women, who could be relieved of their suffering and their lives spared. They are words certainly not entitled to place in our surgical vocabulary.

The spirit should be all abroad in the profession to go at our work, uninfluenced by self, with the highest courage and the deep persuasion that it is duty to relieve suffering and save life at any and every cost, and not to hesitate or stop until the work is done, and completely done. If this is ideal, then he becomes the better surgeon who sets it up as such, and reaches for it. We cannot save all, but we can save more than we do by less hesitancy, greater promptness, more directness and thoroughness, and through better studied and more carefully applied surgical art.

As to the justification of certain operations there will always be a wide difference of opinion. In this relation we will take the opinion of those who, by their experience, have a just claim to speak.

As to the uterine growths or fibroids, so violently at one time did the discussion rage that the doors of professional courtesy were closed upon the advocates of the operation; and in 1872 a committee of the Academy of Medicine of Paris condemned the procedure, reporting that "the extirpation of a uterine tumor is always a serious matter; the uncertainty that exists of completing the operation, the risk of fatal hemorrhage, the nervous shock, peritonitis, and secondary hemorrhage;" and they concluded by asserting that "the success obtained by some surgeons proved nothing."

The work of different operators differs widely in character. Some good operators absolutely refuse complicated operations; they do large numbers of ventral fixations and shortening of the round ligaments (Alexander operation); they also practice incision and drainage, with a mortality higher than it should be in complete work, say four per cent. in vaginal incision and drainage for pus. All-around complete surgery, as given and practised by the originators of our established procedures, would place us on a good and safe footing.

I have not lost a patient since October 16, 1896. The one dying on that date had been ill for some years. The precise nature of the trouble—suppurating tubes and ovaries, with adhesions extending as high up as the umbilicus—had been recognized by two or more attendants. The emaciation and anemia were alarming, and complete suppression of urine followed the operation.

In China the hen is kept constantly busy. When not engaged in hatching her own brood she is compelled to hatch fish eggs. The spawn of fish are placed in an eggshell, which is hermetically sealed and placed under the unsuspecting hen. After some days the eggshell is removed and carefully broken, and the spawn, which has been warmed into life, is emptied into a shallow pool, well warmed by the sun. Here the minnows that soon develop are nursed until strong enough to be turned into a lake or stream.

There are under the ocean, spreading to almost every civilized part of the world, no fewer than 1167 submarine telegraph cables, having a total length of 142,790 nautical miles, and representing a capital of nearly £40,000,000. To keep these cables in repair requires the exclusive service of 37 specially conducted and equipped telegraph steamers. Nearly all these cables have been manufactured at factories on the banks of the Thames.

Riches in Lumps.

The following is a list of the largest gold nuggets ever found, according to the records of the Smithsonian Institution: "King of the Water Moon" nugget, found in Australia in 1852, 223 pounds and 4 ounces. The "Welcome," found at Ballarat, Victoria, Australia, in 1854, 184 pounds 10 ounces; Bakary nugget, found at Carson Hill, Cal., in 1854, weighed 180 pounds, and another at the same place in the same year weighed 149 pounds. These two were the largest gold nuggets ever discovered in America. The Corona, found in Toulumne County, California, in 1850, weighing 147½ pounds. The Farish nugget, found in 1860 at Sierra Buttes, Cal., weighed 133 pounds. One found near the same place in 1869 weighed 95 pounds 6 ounces. The "Great Siberian" nugget, found near Miask, Siberia, in 1842, weighed 96 pounds and 4 ounces.

In 1853 the famous Ballarat mine of Australia (mentioned first in this list) yielded three nuggets which had a combined weight of 357 pounds.

The "Blanche Barclay" nugget, found in Australia in 1842, weighed 146 pounds.

The largest gold nugget ever found east of the Mississippi (and one frequently listed as the "largest nugget found in America") was from the Reed mine in North Carolina. It weighed even 80 pounds.

The "Rattlesnake" nugget, found on Rattlesnake River, in California, in 1871, weighed 106 pounds 2 ounces.

The Meroo Creek mine, New South Wales, produced three nuggets during 1851 that had a combined weight of 318 pounds.

METHOD OF CORRECTING DEFORMITIES OF THE NOSE AND EAR.

M. F. McTAGGART, M. D., NAPA, CAL.

The nose presents a great variety of abnormalities, and owing to its conspicuous position, it bears but a slight disfigurement, with less grace, than can the ear, a more prominent one. Generally congenital deformities of these organs are not serious, although unpleasant to carry around; but whatever the nature of the unsightliness, when its possessor is a person of great sensitiveness and, perchance, would otherwise be beautiful, it becomes a question that demands much consideration on our part as to how far our efforts should extend in cosmetic directions.

To the afflicted such blemishes are not unfrequently a continuous regret that ultimately ends in a chronic despondency. For such persons remedial measures are a hope that turns the course of their whole life into brighter channels; hence presenting incentives to the surgeon that make plastic surgery an art to be greatly desired, and one that should be highly cultivated.

There is, perhaps, no science requiring more accurate judgment, finer calculation, greater delicacy of touch, and nicer finish, than efforts at reducing deformities of the face. Here we have not only to deal with irregularities and deviations from the lines of symmetry; but we must keep in touch with every lineament of the feature. If we mar, wound, or disproportion any part, at the expense of another, even though the anatomy may bear it well, it may be, not only not tolerated, but will probably be resented to a marked degree by the expression.

To act along the line of demarkation between symmetry and the emotional ensemble, without impairing either while improving one, and perhaps both, brings out touches from the surgeon as artistic as do the studied delineations by the brush or the chisel. How much perfection the surgeon may acquire in this art can be told only in the fact that hypertrophied noses may be reduced, crooked noses may be made straight, pug noses may be made symmetrical, long or drooping noses may be shortened, and flat noses may be built up. Projecting ears may be fixed close to the head, unshapely prominences trimmed down, and deformities of these organs greatly improved. The methods of dealing with these malformations will vary as indications demand, and proportionately tax the ingenuity of the operator.

However dexterous his hand may become, every new subject may project characteristics to challenge the surgeon's skill; not so much to merely improve unsightly objects, but to convert them into shapely, and, if possible, pleasing features. With this end in view, he will work to the credit of himself, and to the best satisfaction of his patient; but whatever his aptitude and experience, he will find, in some instances, despite his best efforts, that the greatest results are obtainable, not by the first attempt or the first sitting, but that the second, or even the third, may prove necessary to accomplish the most finished purpose. But bearing in mind that the removal of or the building up a little too much, instead of not quite enough, is a mistake that is almost irremediable, that allowances must be made for contractions resulting from displacements of tissue, that depletion of blood supply, and hence innutrition, are concomitants of cicatrices, enables the physician to counsel with his patient judiciously and reconcile to further operation if necessary.

To definitely estimate the value of the repairs under consideration, accurate observation should be had of the distinct phases and eccentricities that the deformities present.

If the nose typical of prying curiosity and persistent interference can be made into a comely and demurely behaved organ; if the nose of obstinate pugnacity and aggressive audacity can be shaped into a

reserved and respect-commanding prominence; if either of the organs under consideration, carrying with them a menace to the integrity, decorum, and proprieties of life, of whatever shade or however trivial, can be chastened into an appearance of regard for the amenities of social refinements, we have some warrant for attempting to beautify the expression by efforts at converting disproportionate and forbidding features into those of symmetry.

Touching the principles of promoting this end, that is, in noting those deformities that are not fostered by catarrh and other respiratory diseases (such cases must be preceded by a course of medical treatment as preparatory), the first essential is to observe the rules of antisepsis. Healing by first intention, which hinges so much on this, must succeed every operation, else a scar may remain to reflect upon our handiwork.

A clean cut with a very clean knife is far preferable to that of scissors. The blood vessels, it is admitted, are in some measure occluded by the latter; but whatever immunity they insure from hemorrhage is at the expense of bruising and obtunding the tissues to a corresponding degree, obviously rendering a condition that retards or hinders immediate union. Hot saline solution, with compression, generally retracts and closes the capillaries sufficiently to admit of procedure with the knife, preserving the tissues aseptic and quick to respond to the healing process.

Plastic surgery usually draws largely upon the grafting systems; and the various aspects of facial deformities urge us more than those of any other region to avail ourselves of a variety of methods. If skin is to be transplanted, Thiersch's method is, in most instances, indispensable. If tissue is to be built up, sponge grafting is indicated. If the parts are starved of blood supply or show a want of vitality, a resort to Reverdin's process proves beneficial. This latter method, however, is occasionally preparatory to a second operation, which will be referred to later.

Where granulations are exuberant the film of egg or egg membrane supplies a need tending to contract and suppress proliferation. If an extensive surface be denuded, a flap covering, from a neighboring part, is suggested. To obliterate great scars, or hideous malformations, the Italian or the Indian methods prove useful. These are difficult of manipulation, but to get the best results they must be called into requisition.

All these proceedings, however, are confronted by conditions at times that baffle attempts at repair, or oppose their use in their entirety, forcing us to mixed methods. In the substitution of epidermis a healthy surface for its reception is essential to a fertile growth, but in the absence of a fruitful soil a deeper layer must be provided in minute pieces for its covering. To even out depressions, and to provide for lack of tissue where healthy granulation is meager in growth, sponge grafting contributes the requisite need.

On the other hand, if there is abundant granulation of low vitality, Reverdin's plan of imbedding small grafts deeply into the tissue is of great utility in reducing the parts to a normal condition. This, as well as the employment of the sponge, prepares the field for a subsequent operation, the space to be freshened at a future time with a keen knife and covered with skin graft or the flap device.

The expedient of sponge grafting demands special attention. Unless there be a healthy proliferation as a base we cannot employ it alone successfully, to render it available in such a case, or where we have but little more than bone to build upon, as in some operations upon the nose. Then mucous grafts from the inner cheek, combined with sponge, may serve the initial step for a second procedure. This shift usually proves eminently beneficial, leaving a plane for a skin covering by a future transplantation, which generally gives admirable results.

In repairs of congenital deformities where sponge is necessary to fill out hollows, to straighten or to add to the nose, though a considerable portion be required, it is readily adopted by the tissues; and, there being no depraved condition as in ulcerative sores, old wounds, callous, etc., to thwart its purpose, a second operation is rarely called for, nor is a second operation or grafting required in these deformities where the removal of tissue, of carti-

lage or of bone proves necessary to diminish, to shorten, or to straighten, as the case may be.

Scarring is to be averted so far as possible by directing the incisions just beneath the epidermis, the blade lying nearly flat; but being conducted slightly inward until the skin is divided, when the dissection may be freely carried out and any portion desirable removed. Thus governing the course of the knife, a beveled edge is left for coaptation, to which the flap, after having been reduced and pared to a corresponding shape, must be adjusted. In most instances when this is done with precision, the healing leaves but a hair-line, which eventually becomes obliterated.

For projections of the ear, two operations may be successfully practiced. The first involves the removal of an elliptical piece posteriorly not quite through the organ; the lips of this wound are then sutured together and allowed to heal; this process flexes the ear backward, and if the forward projection was not too great it will suffice. The next step, if needed, is to denude a portion over the healed surface and approximate it to a corresponding one against the head by means of sutures or adhesive plaster and bandage.

CURRENT LITERATURE CONDENSED.

The Blood and Circulation in Rhachitis.[1]

There is no general constitutional disease but interferes with normal sanguification. Perhaps the nearest example is that of syphilis, in which anemia may be very grave indeed, and in many instances complicated with leukocytosis; but it is never relieved by iron, manganese, arsenic, bitters, or any other of the many indicata, but by mercury and iodine only. The condition of the blood is commonly impaired by all those diseases which alter the lymphatic bodies or large glands.

In rhachitis anemia, or rather hydremia, is common, not to speak of the emaciated babies whose rhachitis developed in or after severe intestinal or pulmonary disorders. The fat, rotund, and flabby variety exhibits a pale skin and mucous membranes. Luzet found a diminution of red blood cells within three weeks from 2.11 to 1.6 millions; von Jaksch within three months from 1,600,000 to 750,000. Koch and Schlesinger met with an average number of two and a half million red cells in a cubic millimetre of blood. In all these cases the percentage of hemoglobin seems diminished—30 to 60 per cent.—and the number of leukocytes increased—25,000 to 26,000. The increase is caused by polynuclear and neutrophile cells, and does not depend on complications, for instance, with intestinal disorders.

Large tumefaction of the spleen, not always, but often, observed in rhachitis, will always affect the blood and result in leukocytosis. This may be quite dangerous, though it be not made manifest by an early leukocythemic habitus. Such cases are not exceptional at all. Grave rhachitis in my experience was several times complicated with pseudo-leukemia. Indeed, those frequent cases of rhachitis which exhibit many lymph bodies in a condition of swelling and hyperplasia ought to have the blood cells counted and be examined for macro-, micro- and poikilo-cytosis. These cases will improve but little, if at all, with iron. Arsenic does better. But best of all is a thorough anti-rhachitic treatment with proper diet, hygiene, and phosphorus.

Almost every anemia is liable to increase the function of the bone marrow. Thus, also, according to E. Neumann, Berlin (Klin. Woch., 1878, p. 135), pathologic hyperplasia and an occasional leukemia are explained. Litten and Orth came to the same conclusion by experi-

[1] A. Jacobi, M.D., in *Archives of Pediatrics.*

mental research. Indeed bone marrow undergoes a lymphoid change in all serious diseases. How much more readily will such an alteration take place in rhachitis, where the most perceptible changes affect the osseous tissue!

In rhachitis the heart is mostly of normal size, while the arteries are large. The result of this latter condition is a low blood pressure, particularly in distant parts, and where normally the circulation becomes slow. Is that the reason, or one of the reasons, why hyperemia sets in in the epiphyses? If that be so, a very moderate irritation floating in the circulation ought to suffice to get up the whole series of changes constituting what we call rhachitis, at least as far as the bones are concerned. Indeed, we have to do with an abnormally increased vascularization of the ossifying tissues, diminished or abolished deposition of lime, or even softening of parts already calcified, and (through augmentation of epiphyseal and sub-periosteal cartilage cells) exaggerated proliferation of the ossifying tissues. Thus indeed the whole rhachitic process could be called physiologic but for its intensity and duration, through which the formation of bone becomes irregular.

The size of the arteries resulting in slackening of the circulation, contributes also to the swelling of the viscera, predisposed as they are by the succulence and expansibility of their tissues. It certainly appears to be the cause of a cerebral murmur, first discovered in 1835 by Fisher, an American from Boston; it seems to be caused by the large carotid artery, which on account of its size is compressed in the bony channel before entering the cranial cavity.

As I said, the heart of a rhachitic patient is of normal size, and still hypertrophy of the heart is apt to be diagnosticated. The impulse is very perceptible both to sight and to ear, the apex beat extends over a large suface, and the cardiac dullness is unusually extensive. Why? Simply because the thorax is out of shape. For reasons well-known, the chest is either triangular or quadrangular and flattened. The heart thus touches a larger surface than in a normal elliptical chest.

A Case of Carcinoma of the Large Intestine, in which Portions of the Growth were Passed Per Anum.[1]

G. W., a publican, who had, for many years before taking to that business, been a puddler, and was always a strong, healthy man, was more or less under my observation for the last fifteen years of his life. His family history was good. He gave up the heavy work of puddling thirty years ago in consequence of inguinal hernia of the right side, which was followed, eight years ago, by a similar trouble in the left groin. He wore a truss, which kept up the ruptures effectively. When I first knew him he was troubled occasionally by an acutely-inflamed state of an old fistulous track near the anus. This did not open into the bowel, but never completely healed until about three years ago. His bowels were naturally loose, even when perfectly well, and he usually had them moved twice or three times a day. In March, 1894, he had an attack of acute obstruction of the bowels, not in any way due to the ruptures. Aperients and enemas relieved this, and he was soon well again. However, six or eight weeks later he began to have recurring attacks of acute pain over the pubes, which came on five or six times a day and forced him to stool, when he passed liquid, offensive motions of a mahogany color, frequently tinged with blood, and containing streaks of slime. The relief, after each action of the bowels, was only of short duration. Sometimes he had ten or twelve stools a day. He had nausea, but no vomiting, and was easier standing or walking than sitting down. He considered that his symptoms were due to "wind" and indigestion, and described the flatulence as beginning in the left rupture, from which it soared up towards the spleen, and then went down when the bowels moved and relief followed. He obtained distinct relief from a pill containing Pil: Hydrarg: and Ext. Belladonnæ, but his stools were always liquid, frequent, and often defecation was preceded by severe pain. Nothing wrong could be felt per rectum; but after one examina-

[1] *Manchester Medical Gazette*, T. Law Webb M. R. C. S., L. R. C. P. Lond.

tion of that region, on December 28, 1894, he strained a good deal, and passed about thirty ounces of bright red blood unmingled with feces. For twelve days after this he passed an ounce or more of blood every day. It came before each stool, and quite separate and distinct from the motion. Hamamelis checked this, and he was for a time somewhat better. He complained of a constant numbing pain over the sacrum, began to lose flesh steadily, so that on January 24, 1895, he weighed thirty pounds less than in January, 1894.

On February 5, 1895, he had an attack of acute obstruction of the bowel with intense pain, and thought himself dying. After repeated enemas he obtained relief by passing a great quantity of liquid stool of a chocolate color, with much granular, solid matter suspended in it (looking much like fine mahogany saw-dust).

On February 6, after one such motion, he again passed four or five ounces of blood, and at the same time voided "two or three bits of flesh," which, two days after, were shown to me. He was at first alarmed at the appearance of these "bits," but eventually made up his mind that they were portions of a calf's sweetbread, of which he had partaken four days previously! Two of these "bits" I hardened in alcohol and embedded in paraffin, hoping that I might be able to get microscopic sections that would throw light upon the nature of the obstructing growth. As the "bits" had been macerating in tap-water two days before I received them, I did not feel very hopeful that serviceable sections could be obtained. However, thanks to the paraffin method, sections were cut which clearly showed that the "bits" were portions of a carcinoma of the large intestine. Although, owing to the maceration, the epithelium had fallen out of the alveoli in many places, yet in others the spaces were packed with cylindric cells and masses of the cells had infiltrated the muscular coat of the bowel. Moreover, one of the sections displayed fat-tissue invaded by the cancer, so that it would seem as if the disease had already passed beyond the limiting coats of the gut and reached the sub-peritoneal fat. Notwithstanding all this, a marvellous improvement in the patient's general condition took place, due, I take it, to the temporary relief of the intestinal obstruction caused by the tearing away of these portions; for his bowels acted with little or no pain, his nausea left him, and, most wonderful of all, he actually gained flesh and weight. This improvement continued for six months, so that his friends hoped that the diagnosis of malignant growth obstructing the sigmoid flexures was mistaken.

About July, 1895, however, the pain returned, with frequent bleedings, liquid, offensive stools and occasional attacks of acute obstruction. Operative interference of any kind was refused, and the symptoms became more marked. On several occasions further portions of the growth were noticed in the stools. Only once was I allowed to examine one of these, which was too much decomposed to be of any use. Emaciation became extreme, and he died on May 10, 1896. Post mortem examination was not permitted.

The case is of interest, not only on account of its long duration and insidious onset, but also because of the detachment of portions of the growth and the remarkable and long-continued improvement which followed.

I have not had time to refer to published accounts of similar cases; but, judging from the statements of Von Jaksch and other clinicians, it is rarely that portions of malignant tumors come away in the feces. I imagine it is seldom, indeed, that they are detected by the physician.

Rhinolith, Weighing Seventy-six Grains, in a Child Ten Years of Age.[1]

H. L. W., aged ten years (negro), was brought to me in February, 1896, to have some obstruction removed from the left nostril. On tilting the nose upwards with my finger, a large offensive mass was seen, completely blocking up the nasal opening. The eyelids were swollen, tears flowing down the cheek. The entire left side of the face was extremely sensitive to touch, especially over region of antrum of Highmore. The nostril was sprayed with alka-

[1] J. A. Stucky, M.D., in the *Laryngoscope.*

line antiseptic solution, and a quantity of very offensive pus removed. On using the nasal speculum, a large irregular mass of grayish-black color was seen to fill the nostril; neither the anterior nor middle turbinate could be seen or touched with the probe.

A diagnosis of rhinolith extending into maxillary antrum was made. The history given by the mother of the child was unsatisfactory. She said the trouble was first noticed in the nose several years ago. A physician was consulted, who told her the child had catarrh; and he gave her a wash which he said would cause her to sneeze out the obstruction, and nature would effect a cure. There was no history of the child ever getting a foreign body in the nose. The nostril had been stopped up, and the breath had been very offensive for more than a year. She continued to grow worse, though she had been under treatment of several physicians for more than a year. She complained frequently of pain in left eye and cheek, and both were always swollen when she got up in the morning. The irregular shape and size of the mass rendered its removal through the nostril (notwithstanding its characteristic African shape—large, flat and patulous) impossible, without making an external excision; so I determined to remove it by piecemeal. After thoroughly cocainizing the parts, after several attempts with strong forceps, I succeeded in crushing the mass and removing it with hook and nasal forceps. The largest pieces weighed from ten to sixteen grains each. The weight of all removed, not including that that was blown out and washed out, was seventy-six grains.

There were no marks left of the inferior turbinate; I suppose, as the result of pressure and by suppuration, it had been absorbed. The anterior half of the middle turbinate had sloughed away, the posterior half being in a state of necrosis; this was removed with cutting forceps and cold-snare. The nasal wall of the antrum of Highmore was broken down, and this cavity filled with polypoid granulations. The antrum was thoroughly curetted, with Myles' malleable curettes, of all polypoid tissue, and all evidence of necrosis removed. There was free bleeding, which lasted but a short time and stopped spontaneously. After cleansing the cavities with antiseptic solutions, they were packed with iodoform-gauze. The patient was kept under observation for some days. She made a rapid recovery, and required no other treatment than cleansing with spray of alkaline antiseptic. A careful examination of the stone removed gave no evidence of a foreign body as a nucleus, and I conclude this was a typical rhinolith. The child showed no evidence of struma, syphilis, or tuberculosis, and aside from the local trouble was in good health.

Pin Worms.*

There is very little said in works treating upon the rectum in regard to oxyuris vermicularis. Perhaps we ought not to call this a rectal disease, because we find these worms elsewhere. As a general thing, however, they make their home in the rectum. They are about one-half inch long and about the size of a small pin or No. 24 spool thread; hence, the name pin or thread worm. They propagate very rapidly, and are extremely difficult to get rid of. Often we may think they are all gone and stop treatment; in a few weeks' time we find them again as numerous as ever. I hardly know if they result from some undestroyed ova, or worms, or if they originate as they did at first. I have stopped the use of meat, the presumed medium in which the worms enter the system, but this has made no difference, a new attack or an exacerbation of an old one has frequently taken place—the worms would be present again. I am quite well satisfied the first treatment has not entirely destroyed them.

The rectum, above the sphincter muscle, is a large pouch and has many folds and depressions. No doubt some of the ova, or even the worms themselves, have hidden in these folds, and have not been reached by the local medication which has been used and are ready to propagate, and thus we have a new crop. I believe these worms occur more frequently than we think. They sometimes produce a most unbearable pruritus. I think many so-called cases of pruritus and eczema of the

* George J. Monroe, M. D., in *Louisville Medical Journal.*

anus and rectum are caused by them. I have thought that internal hemorrhoids have been produced by them. I see no reason why this might not be the case. They certainly cause a great deal of irritation and annoyance. When located in the vagina they generally occasion a vaginal catarrh. On account of the itching, and the scratching and rubbing that women use to allay it, the habit of masturbation has been acquired. I have had young girls under my care, where this habit has been established, by the means they have made use of to get rid of this intolerable pruritus. I had a boy under my care once, who became a masturbator from introducing his finger into the rectum to relieve the itching which these worms produced. The pressure of the finger in the rectum caused the seminal emissions.

I give the patient from five to ten grains of calomel, in divided doses; I follow this with one ounce oleum ricini and from ten to fifteen drops oil of turpentine, mixed with the oil. This I give at one dose. Use santonin or any other vermifuge if desired, although I do not think they do much good. They may act as aids to our local treatment. Quite often we find the general system below par; we may then give cod-liver oil and the hypophosphites. I depend mostly upon local treatment in the form of injections. These injections have to be persisted in for some time if we expect a permanent cure. The injections may be salt and water (one tablespoonful of salt to pint of water). Infusion of quassia, carbolic acid water (from five to ten grains of carbolic acid to pint of water); infusion of green tea, vinegar and water (two tablespoonfuls of vinegar to pint of water). These may be used alternately. It is a good plan after these injections pass away, to wash out the rectum with a pint of cold water. I continue these injections twice a day, so long as any worms are found, then once a day for a week or two, then drop to twice a week for three weeks longer. If this course is followed, we can rest assured we will get rid of the worms.

An accident gave me a good idea about the treatment of pin worms. Several years ago I treated a gentleman for hemorrhoids; I prescribed tincture of opium mixed with sweet oil to be injected into rectum, provided he suffered much pain. This combination he had in a tea cup upon the mantel, so as to be handy to use if needed. His little boy was suffering with some stomach or bowel trouble. The physician who was treating him ordered cloths to be wrung out of turpentine and placed over the bowels. This turpentine was also in a tea cup on the mantel; by some means the position of the cups became changed. My patient was suffering a good deal in the night and decided to take an injection of the laudanum and oil; of course he used the turpentine instead of oil; he soon discovered his mistake, and used injections of milk, sweet oil, etc. He did not suffer much from the local effect of the turpentine, in fact very little. Next morning his bowels acted freely, and in the action were hundreds of dead pin worms. Might not these worms have been the cause of his piles? His piles got well, and he had no more trouble with his rectum. I have never been able to find any pin worms since. In a few cases where the worms have been persistent, I have injected turpentine in form of an emulsion, or mixed with some bland substance, and have, by its use, accomplished cures.

A Case of Chyluria.*

James G., male; age thirty-eight; unmarried; occupation, a farmer; nativity, Oregon, was admitted to the hospital September 15, 1896, giving the following history: paternal and maternal histories good; has three brothers and one sister; one of the brothers has some symptoms similar to his own; his sister is insane. The patient's health during early childhood was not good. He had most all the diseases common to childhood, such as whooping cough, measles, etc. His present trouble dates back about fifteen years, when he suffered at times with severe pain in the back in the region of the kidneys.

This condition was followed about two years later with a profuse discharge of milky-looking urine a few hours after feeling the pains in the back. The urine

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* G. Ed. Gavin, M. D., in *Louisville Medical Monthly.*

contained a number of coagulæ, varying in size, looking not unlike the solid part of buttermilk that has undergone fermentation. During the intervals of the passing of the milky urine his urine was normal in color and quantity, but he seemed to be inclined to pass it a little often, probably from habit and not from cystitis. The patient's general condition was very good when admitted and has continued to mend ever since under scarcely any treatment but hygienic. He has a good appetite, sleeps well, but has not a perfectly sound mind, which manifests itself in the conversation by a sudden stop and gazing at something in front of him; he forgets what he is talking about until it is mentioned again, when he will resume the conversation and talk as freely and sensibly as any one. He says he is troubled less in this way now than he was a year ago.

The above symptoms led me to suspect sexual excesses were more than probable, and in reply to my questioning I gained information in the affirmative. He had kept this excess up for about twelve years, when he noticed that his sexual passions were beginning to fail him, and also that he was passing milky urine. About three years ago he lost the power to have an erection, and the milky fluid came oftener, accompanied at times with great pain in passing larger lumps of the coagulæ spoken of above. At the first sight of his urine I thought the condition a very grave one, for it looked as though it were loaded with pus. A close microscopical examination showed the opacity of the urine to be due to fat globules. Based upon the history and this same condition of the urine upon repeated examinations, the diagnosis of chyluria was made. I have never been able to find the "filaria homini sanguinis" in the blood, spoken of so often in connection with this disease.

The question still remains to be settled whether this condition is due to the action of a special germ or whether it was possibly brought about by the constant irritation produced by so frequent copulation, causing an opening of the chyle ducts into the bladder. No doubt they open into it, but the exact cause is not known. Treatment is really nothing. The only changes noticeable since his admittance are that he seems to be improved some in general health, and the intervals between the passage of chylous urine are much longer. His temperature, pulse and respiration have been normal all the time.

I have reported this case because the condition is rather rare, and if not examined thoroughly microscopically, may readily be mistaken for pyouria. It would, no doubt, by most practitioners without a microscope have been treated as pus in the urine, and not for what it really is—chyle in the urine. I not long since saw a case of ascites reported in which the writer said that the only peculiarity about it was the milky character of the fluid, but never attempted to explain the cause for the condition. After studying the above case so thoroughly, I am satisfied that the condition reported by the gentleman was due to an abnormal opening of the chyle ducts into the peritoneal cavity.

First Things.

First Atlantic cable operated, 1858.

The first steel pen was made in 1830.

The first lucifer match was made in 1829.

The largest island in the world is Australia.

First musical notes used, 1338; printed 1502.

Kerosene was first used for illuminating in 1826.

National banks first established in the United States, in 1816.

Slavery in the United States was begun at Jamestown in 1619.

First post-office established, between Vienna and Brussels, 1516.

Moscow, Russia, has the largest bell in the world, 432,000 pounds.

Columbus discovered America, Oct. 12, 1492; the Northmen, A. D. 985.

The first theatre in the United States was at Williamsburg, Va., 1752.

The first complete sewing machine was patented by Elias Howe, Jr., in 1846.

1853-1897.

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PHILADELPHIA, SATURDAY, APRIL 3, 1897.

EDITORIAL.

EXTERNAL APPEARANCES.

Until very recently there has been a prevalent opinion that professional success depends largely on factors over which the individual has comparatively little control. Age has been emphasized as perhaps the most important of these elements; it has been stated that a high, dome-shaped forehead is attractive to patients, though, unfortunately, it too often indicates the inhibiting effects of an early hydrocephalus. Hirsuteness of the face and alopecia of the scalp have been considered as beneficial to the doctor's prospects in life, while the opposite condition has been thought to be a contra-indication to engaging in the practice of medicine. An imposing collection of at least three, and preferably four, names, black clothes and solemn countenance, even a moderate exhibition of the ponderousness and infirmities of advanced life, have had their advocates.

Yet a little investigation of the actual state of affairs will show that this popular conception of the typical physician scarcely deserves the stress that has been laid upon it, and that the laity, as well as the medical profession, is becoming more and more able to recognize competence and industry for their own sakes. The medical profession has undergone great changes in the last two generations. From a comparatively small body of men, easy-going as to study and hard-worked as to practice, it has grown to an army of a hundred and twenty thousand in this country alone, and the necessity for sharp competition, however dangerous to the welfare of the average doctor, has not been entirely lacking in good results, and its best one is that it has compelled habits of industry, and has relegated the man who was actually practicing "on his shape" and other ex-

trinsic attributes to the background of the profession.

It is a most wholesome indication of the trend of social development that the professional man has stepped down from his pedestal. Partly through force of circumstances, partly from the choice of the privilege of mingling on equal footing with those more actively engaged in business pursuits, the minister, the lawyer, the physician, the teacher, are abandoning their professional mannerisms and are asking to have their work judged according to standards of actual value.

To limit the discussion to our own profession, people are beginning to choose their attendants without regard to a sick-room manner, decorous dress and solemn demeanor. Age, so far from being the keynote of success, is already recognized as possibly discordant with modern methods, and it is significant that some of the oldest members of a medical society are the most youthful in their democratic relations with much younger confréres, and most eager to be young in practice if not in years. One needs only to study the portraits of the men of our profession who have recently won the highest reputations and have secured the greatest degree of business as well as professional success, to note that diminutive stature, scanty beards, informal dress, even personal repulsiveness, do not necessarily interfere with ambition.

ABSTRACTS.

AUTO-INFECTION FROM THE INTESTINAL CANAL.*

S. G. GANT, M.D., Chicago, Ill.

As I understand it, auto-infection from the intestinal canal means that pathologic condition resulting from the absorption of poisons generated within it. It matters not whether they are the result of chemical, putrefactive or fermentative changes, or bacterial action.

That the organism might be poisoned by the products generated within it was until quite recently looked upon with skepticism. To-day we are forced to admit that such a thing is of common occurrence. Recent investigators have given abundance of proof of poisons generated within the colon, and further that the various organs of the body—the brain, the liver, the lungs, the kidney, etc.—are frequently invaded by the bacillus coli communis and other micro-organisms, and some pathologic condition induced as a result thereof. They have gone a step further than this, and demonstrated the fact that toxic substances that are disease-producing independent of bacterial action, are being constantly formed within us in health.

As regards auto-infection from the intestinal canal, we have as yet very little proof of the absorption of poisons from this source, or as to the manner in which it occurs. Many of our best clinicians express themselves as believing that the cause of many diseases, the pathology being obscure at present, will be explained when we become more familiar with the part played by the contents of the human sewer.

Bouchard well says, "The organism in its normal, as in its pathologic state, is a receptacle and laboratory of poisons. Some of these are formed by the organism itself, others by microbes, which either are

* From *Langdale's Lancet.*

the guests, the normal inhabitants of the canal, or are parasites at second hand, and disease-producing."

Because of this fact we may become intoxicated on one hand from the alkaloidal poisons formed during digestion, and, on the other, as a result of unusual activity of the bacteria—the normal inhabitants of the intestinal canal—and their ptomains. As we become more familiar with the almost innumerable poisons within us, and their effects when injected into the lower animals, we are forced to admit that we are constantly tottering on the brink of self-destruction, and that we only need to disobey some of nature's laws to upset the equilibrium, and to fall a prey to some one of these poisons. Our Creator, however, foresaw all dangers, and provided us abundantly with safeguards with which we can destroy or neutralize the poisons, on the one hand, or throw them off, on the other, as soon as they are formed.

It becomes apparent, then, that for auto-infection to take place, two things are essential:

1. There must be an impairment of physiologic action somewhere.
2. That poisons are being constantly formed in us in health.

In the physical system every cell has a duty to perform, and the same can be said of those aggregations of cells which we call organs. Impair or destroy a single one and the economy suffers, and the effect is in proportion to the importance of the work normally alloted to it. If from any cause the liver, the lungs, the skin, the kidneys or the blood should get out of order and fail to perform its function, poisons that are being constantly secreted are not being rendered harmless, on the one hand, or are not being thrown off on the other, but are allowed to accumulate and enter the circulation (possibly lymphatics), and are distributed throughout the body, causing local or systemic infection, as the case may be.

It is at times very difficult to determine, in cases of auto-infection, where health leaves off and disease begins; this is because of the fact that, on the one hand, these poisons are physiologic factors, and, on the other, as soon as the system becomes susceptible, they become active pathologic factors.

Perhaps the most frequent and immediate cause of auto-infection is "constipation," and more especially when complicated with fecal impaction. In the latter case we have the retention of the feces for a variable length of time; as a natural sequence effete matters accumulate in the bowel, and by remaining, undergo chemical changes, and poisons of the ptomain and leukomain classes are formed, which are as active as any poisons that could be introduced from without, as, for example, typhoid fever and cholera, wherein the bacillus runs its entire course in the intestines. This condition also favors the rapid growth of septic micro-organisms within the intestinal canal.

Next to constipation as a cause comes diarrhea, for liquid stools render soluble and distribute the poisonous elements contained therein to any exposed points of the mucosa, thus insuring their entrance into the circulation.

As a result of the accumulation of poisons, we have systemic infection induced; it may or may not run a chronic course, depending on the removal of the offending mass. If nothing is done to prevent the formation of poisonous products, they soon manifest themselves in the clinical pictures with which we are all more or less familiar—chlorosis and anemia

The Circulatory System.—As a result of auto-infection we have a disturbance in the circulation; the cutaneous vessels become contracted, thus throwing an increased amount of blood into the central organs, and the body's equilibrium is interfered with. The pulse may be slow and full, on the one hand, or rapid and feeble, on the other, depending on the extent of the intoxication and its influence upon the muscular fibres of the heart and upon the nervous system. Frequently the heart is very excitable and patients have fainting spells. Sometimes, instead of the blood being retained in the central organs, it seems to remain in the extremities and causes a dilatation of the veins. Hemorrhoids are almost invariably present in those who suffer from auto-intoxication for a considerable time.

The Respiratory System.—The effects of auto-infection on the respiratory system are not so numerous as they are on the

circulatory or nervous systems. Their effects are shown more quickly and in a more aggravated form when the intoxication is complicated with some lung trouble; and *vice versa*, all lung diseases become markedly worse when there is systematic intoxication, for there is deficient oxygenation of the blood. It would appear, from recent investigations, that the colon bacillus plays an active part in the causation of some forms of pneumonia and empyema, but more frequently when there is a lesion of the intestinal mucosa.

The Skin.—The skin shows the effect of the intoxication in its pale, muddy, unhealthy color, foul-smelling secretions, and in any one of the many skin diseases.

The Nervous System.—When there is auto-infection to any great degree it manifests itself in some of the many nervous phenomena that we see so frequently in our every-day practice. One of the most frequent manifestations is a feeling of drowsiness, due to the effects of the absorption of one of the intestinal gases, likely that of sulphuretted hydrogen which is known to have a soporific effect. Though the patients feel drowsy, they are poor sleepers; they roll and toss about the bed; they are frequently awakened by horrible dreams, or find themselves wandering about their rooms. In the morning when they arise, they do not feel refreshed; but on the contrary, they feel weak, nervous, exhausted, and find their clothing moist by a clammy, unhealthy perspiration.

I believe that a very large percentage of all headaches and neuralgias are due to auto-infection, it matters not where the pain is located. For I have many times witnessed the disappearance of the headache after the bowels have been completly emptied, without the assistance of a single dose of medicine.

As for the single germ of intestinal origin, the most frequent disturber in the neighboring and distant parts, the bacillus coli communis leads them all. This germ seems to be the king of disturbers and has been found in nearly all the organs of the body, and under circumstances that have led investigators to believe that it unquestionably has pyogenic properties. Many other germs, with known pathogenic properties, have been proven to be identical with this bacillus.

I shall not attempt to more than mention a few of the diseases in which the colon bacillus appears to be the most active agent. It has been known to manifest its presence in the following conditions:

1. Infectious diarrhea.
2. Empyema (following enteritis).
3. Broncho-pneumonia.
4. Endocarditis.
5. Cystitis.
6. Nephritis and pyelonephritis (surgical kidney).
7. Disorders of the liver (icterus).
8. Appendicitis.
9. Peri-appendiceal abscess.
10. Perforative peritonitis (also in cases of lesions of the intestine without perforation).
11. Laparotomy wounds.
12. Strangulated hernia (in fluid of).
13. Peri-rectal abscess, etc., etc.

These are sufficient proof of this germ having pathogenic and pyogenic properties. Until quite recently it was supposed that it did not enter the circulation and produce disease in distant parts unless there was a lesion of the intestinal mucosa. We are today taught that the bacillus coli communis is capable of entering the circulation, whence it is carried, and does not produce disturbance independent of any intestinal lesion. It is quite easy to understand the way in which it reaches and affects the genito-urinary tract and the liver.

As to reaching the liver, this normal inhabitant of the intestinal canal has but to walk leisurely, as it were, up the intestine and through the door of the common bile-duct to gain access to her "Majesty's innermost chamber," causing an infection therein. It is remarkable that we do not see biliary infection more frequently than we do.

TREATMENT.—I will not attempt a detailed discussion of the many remedies that have been suggested for the prevention and relief of auto-infection of intestinal origin, but will mention only the salient features.

The treatment in a large measure should be prophylactic, and every effort should be put forward to keep the system in perfect order and the equilibrium maintained; so

long as this is accomplished nature is capable of defending herself against any and all toxic substances generated from the body. Any disease or symptom of disease that would predispose a patient to auto-intoxication from poisons normally generated within the body must be eradicated at once.

There are three essential features which must be constantly borne in mind in the treatment of auto-infection:

1. We must remedy any condition which predisposes the patient to self-infection.

2. We must use every possible means to prevent abnormal production and absorption of poisons within the intestinal canal.

3. We must do all we can to assist nature to neutralize and eliminate poisons already absorbed.

To accomplish the first we must correct any condition that will cause an erosion or that weakens the mucous membrane in any way, because it prepares the way for the entrance into the circulation of toxic substances within the intestine. Hence we must correct irritative discharges of all kinds; we must heal ulcers and fissures; we must remove hemorrhoids, polypi, and other growths. In fact, we must get rid of any local disease of the rectum and colon present, or all our efforts directed towards the prevention and relief of auto-infection will be useless.

There are some cases in which we find no local cause; then we must look elsewhere, and in all probability the exciting cause of the infection will be found to be either diarrhea or constipation, and fecal impaction—conditions that must be remedied at once. Whenever there is an irritant within the intestinal canal that promotes auto-infection, the safest plan is to give a vigorous cathartic, one of the mercurials if you choose, which will cause it to be expelled. Then we must institute a laxative tonic treatment, to be continued for a long or a short period, dependent upon the extent and continuation of the infection. Very often poisonous substances can be eliminated from the system by the constant and abundant use of reputable mineral waters known to have a cathartic action. Sometimes it will be necessary, in addition, to administer a pill composed of aloin, strychnin and belladonna, which has stood the test of time, or one composed of the lactate of iron, extract of nux vomica, and purified aloes, given three times a day. In the treatment of auto-infection it is necessary to correct errors in diet, prohibit the use of alcoholic stimulants, and have our patients take only such foods as they can digest easily. If we were going to recommend any special diet we should select milk, for experience has proven that it is opposed to all sources of intoxication and puts a check upon auto-infection due to intestinal putrefaction.

We now turn our attention to the second feature in the treatment, and endeavor to prevent the abnormal production and absorption of poisons. To accomplish this we must resort to the intestinal antiseptics, both local and systemic. Perhaps the best general antiseptics, either alone or in combination, are the iodids of potash and sodium. We have many times witnessed beneficial results from the continued use of these drugs in cases where the system was saturated with poisons. There are many medicines that are highly commended as intestinal antiseptics, such as iodin, creosote, benzoic acid, boric acid, salol, resorcin, turpentine, the mercurials, etc. Many of the above-named antiseptics undergo changes in their course through the alimentary canal, ere they reach the colon, which diminishes their activity. The best results are usually obtained through those insoluble drugs which remain unchanged throughout their course, such as bismuth salicylate, salol, iodoform and naphthalin. When the salicylic acid accumulates in the blood and threatens complications, bismuth subnitrate may be substituted for the salicylate. In giving these intestinal antiseptics it is not necessary that the dose should be sufficiently large to kill the bacteria, but large enough to render them dormant, as it were, thereby preventing their multiplication. We know of nothing better than bismuth subnitrate in combination with charcoal to neutralize poisons already formed and to prevent fermentation and putrefaction. We make up a powder containing ten grains each, to be repeated at short intervals until

there is evidence of relief, such as a diminution of tenderness over the abdomen and tympanites. The bismuth seems to prevent the putrefactive fermentation, while the charcoal diminishes the toxins. Iodoform may be combined with charcoal or with naphthalin to accomplish the same purpose. To diminish the fecal odor as well as the toxicity, Bouchard combines seventy-five grains of naphthalin with an equal amount of sugar, made aromatic with one or two drops of bergamot. This mixture he divides into twenty powders, and gives one every hour. In this way he claims putrefaction in the intestinal tube may be completely suppressed.

The last feature in the treatment consists in assisting nature to neutralize and eliminate poisons which have already entered the circulation. To accomplish this we must see that the eliminatory apparatus is in perfect order, for when any one of the emunctories gets out of order, poisons immediately accumulate in such quantities that nature can neither neutralize nor eliminate them. The blood must be toned up by tonics, if necessary, the liver and kidneys by medicines that will stimulate them to renewed activity, and the skin must be kept in order by frequent cold baths, followed by a brisk toweling and massage. In addition to remedies directed for the perfection of the emunctories, we must see that patients suffering from auto-infection lead a simple, regular, active, occupied life, and do not mope about and brood over their afflictions.

TRICHOMONAS VAGINALIS.*

N. S. DAVIS, Jr., A. M., M. D., † Chicago, Ill.

A single case of infection by trichomonas has come under my observation. The patient upon whom I found this parasite was suffering from nephritis with mild uremia and glycosuria. It is probable that the infection by trichomonas had no relation to these maladies.

In August, 1894, Mrs. —— of Portage City, Wisconsin, came to my office, and I recorded the following history and symptoms: She had had no severe illness since childhood. During the last two years she was much depressed and worried for good reasons. She lost forty pounds of flesh in the past year, but is still rather obese and of a ruddy complexion. Last summer she suffered much from thirst and drank copiously to satisfy it. She was also much tormented for a time by pruritus of the genitalia. In the fall she noticed some edema about her ankles. At Christmas time frequent attacks of asthma kept her awake at night, and occasionally by day shortness of breath and palpitation troubled her. Sugar was found in her urine a month or two later.

She was not, when she visited me, making an abnormal quantity of urine and gave no history of having done so. She suffered moderately from flatulent indigestion. Her bowels were regular. She was extremely nervous, and her sleep was much disturbed. She felt no pain, but complained of weakness, especially in the lower part of her legs, of lack of energy and endurance. Her pulse was regular, about eighty; it was accelerated in part by the excitement of an examination, and tense. A satisfactory physical examination of her heart could not be made because of the thickness of the walls of the chest. The cardiac sounds were normal except the second sound over the aorta, which was accentuated. There was nothing abnormal in her breathing, her respiratory sounds were quite natural, and resonance was uniform and good over her chest. The liver was not enlarged. She did not urinate with undue frequency, nor was there any pain while micturating. Her

* Chicago Medical Recorder.

† Prof. Principles and Practice of Medicine and of Clinical Medicine in the Northwestern University Medical School.

feet were moderately edematous, as were her legs half-way to the knees. She said the edema disappeared entirely during the night.

A sample of urine made at my office was not quite clear, of a normal amber hue, acid in reaction, had a specific gravity of 1,030, contained two-tenths of one per cent. of albumin, considerable sediment, and four grains of sugar to the ounce. In the sediment there was an abundance of pus cells, vaginal epithelium, large, round or oval, granular and brownish cells, and living, moving ameboid bodies, mostly of oval shape. A very few hyaline casts were also found in it.

A week later she reported not much change in her feelings. Sometimes slight involuntary twiching occurred in her legs and arms. She also felt at times mentally confused. She then told me that for six weeks her sight had not been as good as usual, either for near or distant objects, and that the right eye was the most impaired. She had failed to estimate the quantity of urine made in twenty-four hours. The sample which she brought looked like the last, but the amount of sugar was more than one-half less, the amount of albumin was the same. The sediment contained a few granular and hyaline casts, a moderate number of leucocytes, a few red blood cells and large, round cells, which contained some dark pigment granules. A few similar granules were observable in some of the leucocytes. The same ameboid bodies were present. The edema of her feet and legs had not changed much. The asthmatic attacks occurred a little less frequently.

During the next three weeks she was seen often. Her condition, with some fluctuations, gradually improved. The urine constantly contained squamous epithelium and flagellate bodies in varying numbers.

The middle of September she reported herself stronger; she slept well, ate better, was less frequently nauseated and experienced no dyspnea. Her bowels had been loose and she had had constant burning in the small of the back for ten days. There had been no edema for some time. She made three pints of urine daily. Its specific gravity was 1,020. It contained a trace of sugar and a slightly increased amount of albumin.

The last of September I received a letter from her saying that the nausea had again increased, the diarrhea continued; she was more flatulent and felt much depressed mentally. Her eyesight seemed less acute. While in the city she had been unable to consult an oculist; I cannot therefore describe the nature of her eye trouble, but suspected it resulted from the albuminuria. She sent a sample of urine, but had not measured the amount made in twenty-four hours. Its specific gravity was 1,022. It contained no sugar and about one-tenth of one per cent. of albumin. In its sediment there were a few small broken granular casts, numerous tailed epithelial cells, a few leucocytes and dead protozoa.

In October she wrote that she felt much better, stronger, no edema or asthma. She made approximately three pints of urine daily. The specific gravity of that sent to me was 1,020. It contained no sugar, a little less albumin, but the same sediment.

After this I did not hear directly from her. A year later a neighbor reported her in good health, but thinner than formerly. Recently, two years after the first examination, I heard again in an indirect way that she was living, cheerful and able to do considerable work, although somewhat feeble.

My attention was attracted to the protozoa at my first examination because of their movements and similarity to forms that I had often watched in stagnant pond and ditch water. The dead ones seen in later specimens of urine might readily have been overlooked, for the cilia attached to them could only be seen by very careful focusing. Their bodies might easily have been mistaken for unusually clear, oval or round epithelial cells. They were clear and homogeneous in appearance. When dead they were mostly round, occasionally oval. When alive they were usually oval, especially if in motion. If they were attached, as often they were, to epithelial cells, they assumed various shapes. When in motion the forward end was generally narrowest, and from it projected several rapidly moving cilia. Just back of these cilia on one side there appeared to be a line of short, moving cilia. But Kunstler has demonstrated that what

appear to be short cilia in motion is an undulating membrane. Often at the other end of the protozoon a threadlike tail was visible, by which at times it was attached to epithelial or other cells. Several times I saw some of them with round bodies connected by a narrow neck, three or four times longer than most of the protozoa, with a smaller head, which bore the cilia and undulating membrane.

These micro-organisms interested me much, as I had never before seen anything like them in urine. The literature at my hand was so meager that I could get little help in studying them. So far as I could learn, no pathologic importance attached to them. I found that they died quickly in the urine, even if it was kept at body temperature. I was therefore led to believe that they were washed from the external genitalia, rather than from the bladder or kidneys. At my patient's second visit I examined carefully the genitalia. They were moist, not reddened, or in any way unnatural; perfectly clean. I found the ameboid bodies in large numbers in scrapings from the vagina, from the labia minores and from the meatus urinarius. They were so numerous that they could be studied well in their varying forms. They retained life much longer in these scrapings from the genitalia than in urine. They were also more readily stained by aniline dyes, although the majority did not stain well by the methods I employed. The most satisfactory results I obtained with methyl blue. When colored by it a medium-sized oval nucleus could be seen in many, but not in all. The protozoa averaged in length about two-thirds of a squamous epithelial cell from the external genitalia, but they were not so broad; many were decidedly shorter. The cilia were from one to one and a half times longer than the ameboid body. The tails or pseudopodia were oftener absent than present, and very variable in length.

No symptoms were observed in this case which could be ascribed to the trichomonas, unless the presence of epithelial cells from the meatus urinarius and its neighborhood in unusual numbers can be considered abnormal. Their presence was probably due to the trichomonas. This form of protozoon has been found by other observers in the intestine, vagina, urethra and bladder, and possibly in one case may have come from the pelvis of the kidney. In December last, Schmidt, in the *Muenchener Medicinishe Wochenschrift*, reported from the clinic at Bonn the finding of flagellate protozoa in the sputa of three patients. They were always found in Dietrich plugs. In all three cases there was dilatation of bronchi. Schmidt called them trichomonas pulmonalis, but admitted their identity with trichomonas vaginalis.

These micro-organisms have been called by different observers trichomonas vaginalis, trichomonas hominis, trichomonas intestinalis, trichomonas pulmonalis, cercomonas hominis, cercomonas vaginalis, etc.

Most writers upon trichomonas believe it nonpathogenic. In the case described by Dock it seems probable that it provoked a chronic cystitis. Hematuria occurred occasionally in this individual during the period of infection. Dock points out the coincidence of attacks of hematuria and infection by trichomonas in several of the cases reported by other observers, and suggests that some cases of supposed malarial hematuria may have been due instead to trichomonas infection. It is quite possible that in the bladder it may cause inflammation and even hemorrhage, although inocuous in the vagina and rectum.

Urine is examined so frequently and so carefully, and these flagellate protozoa are so rarely seen in it by clinicians, or even mentioned in text-books as occurring in it, that infection of the urinary channels by them must be considered uncommon. The literature of the subject as collected by Dock is small. A few articles have appeared since his. The infrequent description of trichomonas in the secretions of the mucous membranes oftenest infected by them, I believe is proof of its rare occurrence in man, in spite of R. Blanchard's assertion that it can be found commonly if sought for.

Every guest at a Norwegian wedding brings the bride a present. In many parts a keg of butter is the usual gift, and, if the marriage takes place in winter, salted or frozen meat is offered.

LEGAL RESPONSIBILITY OF A PHYSICIAN FOR THE NEGLIGENCE OF HIS PROFESSIONAL SUBSTITUTE,*

It is customary for the physician, when temporarily absent from his practice, to intrust it to another physician; and, in the recent case of Blank *vs.* Hathorn, which arose in New Jersey, the duties and liabilities of the principal and his professional substitute were ascertained and defined.

The action was brought on the theory that the substitute was the agent of the absent physician, who, as a consequence, is liable for the results of the negligence or unskilfulness of such substitute. The trial court adopted this view; but the Court of Appeals, to which the case was carried by the absent physician against whom a verdict was obtained, declared this to be error, holding that each physician was engaged in a distinct and independent occupation of his own, having no business connection with the other, except such as might incidentally arise from the one attending the patient of the other while he was temporarily absent; and that in such case the regular physician is not liable for the want of skill in his professional substitute.

The principal facts which were proved at the trial of the cause are as follows: The defendant, a practicing physician of the city of M., promised the plaintiff, who resided in that city, to attend his wife professionally during her confinement. A short time before that event took place he left the city for a three days' vacation; having first visited the wife of the plaintiff, and made an examination of her condition, from which he concluded, as he informed her, that his services would not be needed for a few days. Before his return, however, she was confined. The plaintiff, when his wife's travail came on, telephoned to the house of the defendant for him to come at once; and in response to this message one Doctor P. arrived, stating that Doctor B. was out of town, and he represented him, and proceeded to take charge of the case, and to deliver the plaintiff's wife of her child, without any objection being made. It was not suggested that his treatment of the wife was unskillful, but evidence was offered to show that after the birth of the child he improperly severed the umbilical cord so close to its body that it was impossible afterwards to tie it, and that the child consequently died, in a short time, of umbilical hemorrhage. The shock caused by the child's death under these circumstances, it was testified, so affected the mother as to seriously injure her health, and render her an invalid for many months, thereby depriving the plaintiff of her services and companionship, and making it necessary for him to incur expenses which he would not otherwise have been called upon to meet; and this suit was brought to recover compensation for such loss of services and companionship, and for such expenses, on the theory that Doctor P. was the agent and representative in this matter of the defendant, and that, therefore, he was legally liable for these results of Doctor P.'s unskilfulness. The trial judge adopted this theory, advanced on behalf of the plaintiff, in his charge to the jury, and so instructed them. "In this," says the Supreme Court, in an opinion by Gummere, J., "there was an error. Doctor P. and the defendant were each of them practicing physicians of this State, having no business connection with one another, except that Doctor P. was attending the patient of the latter while he was temporarily absent. Even if it be admitted, therefore, that Doctor P. was employed by the defendant to attend upon the wife of the plaintiff, that fact did not render the defendant liable for his neglect or want of skill in the performance of this service, for an examination of the authorities will show that a party employing a person who follows a distinct and independent occupation of his own is not responsible for the negligence or improper acts of the other.

"But," continues the judge, "even if I had reached the conclusion that Doctor P.

* *International Medical Magazine.*

was the agent of the defendant, in his attendance upon the wife of the plaintiff, I should nevertheless consider that there could be no recovery in this case for the losses sustained by the plaintiff. He does not complain that his wife was unskilfully treated by Doctor P., and that he thereby lost her services and companionship, and incurred expenses on that account to which he would not otherwise have been put. His claim is that such unskilfulness caused the death of his child, and that the shock of its death caused the sickness of the mother, with the consequent deprivation of her services and society, and the increase of his expenses. The gravamen of the action, it will be perceived, is the death of the child; and the injury sustained by the father, for which damages are sought to be recovered, is the result of that death. Since the decision of the Supreme Court in the case of Grasso *vs.* Railroad Co., it has been considered as settled law in this State that no action will lie for an injury caused by the death of a human being, with the exception of that provided by the Act of March 3, 1848, which permits a recovery by the personal representatives of the decedent, for the benefit of the widow and next of kin, of the pecuniary loss resulting to them from such death. The decision in that case was rendered after a careful and exhaustive consideration, and the views expressed by Magie, J., in delivering the opinion of the court, must be accepted as a correct exposition of the law on the subject. The judgment of the Circuit Court should be reversed."

It must be borne in mind, however, that the doctrine of agency applies in the case of a medical student. And, accordingly, the preceptor is liable in damages to a patient for unskilful treatment by his student whom he has sent to attend such patient professionally.

COMMUNICATIONS.

ASSOCIATIONS TO DRIVE DOCTORS OUT OF EXISTENCE.*

I am told that in Chicago there has been formed a company that guarantees to subscribers medical treatment in a hospital, free drugs, etc., on payment of a certain sum monthly. This is not a club, but a commercial company, that assumes all the risks and pockets the profits. The company comes out boldly and advertises for customers as openly as any quack in the advertising business. Among other things it offers a "sure cure" for hernia. No pretense at charity is made, no restriction to the poor appears in the advertisements. A millionaire can enter his name and obtain his medical advice, including hospital service, for the sum of $6 a year.

What the effect of such a movement will be upon the medical profession it is not difficult to foresee. What with the hospital, the dispensary, the specialist, the practising druggist and the advertiser who persistently thrusts his wares into the patient's hands, the doctor is pretty well surrounded, his business reduced to a minimum, his emoluments shorn and clipped until we are compelled to ask: "How under the shining sun does he make his living?"

The answer is, unfortunately, an easy one: He doesn't make it. Aided by outside resources, by farm or interest in mercantile operations, or by other non-professional sources of income, he manages to exist; but many thousands of doctors do not realize from their practice enough to support themselves and their families.

There is just one vantage ground remaining, and that is the confidence which our patients have in us personally. So long as such schemes are presented simply in their commercial aspect by men who as physicians are nobodies, the good sense of the patient will prevent his entrusting his health to such hands, in preference to the doctor in whose good faith, honor and skill

* Editorial in the *Alkaloidal Clinic* for March. Advance sheets.

he has confidence. But when the day shall come in which physicians of note lend their names to such an enterprise, it will be the most disastrous blow as yet struck at the medical profession. If for fifty cents a month a patient can secure the services of men who have an accepted rank and standing among the leaders of medicine and the endorsement of men high in the profession, what chance has the unfortunate family doctor?

Men forget how much of their success they owe to the profession. The heritage from centuries of workers, who have each helped to come at the truths of our science and given the results of their labors to us freely, constitutes a trust fund which we, the present possessors, are in honor bound to transmit to our successors. We are custodians, not owners.

Our surgeons and other specialists owe much of their skill and their income to the family practitioners, who send their patients to them. It would be base ingratitude for such men to stab their benefactors, by indorsing any such scheme to deprive them of their livelihood. Let the first prominent man who lends his name to any such enterprise be made to feel that the amount he realizes from it is the price paid him for his place in the estimation of the medical profession, and that he cannot have cake and penny both. I doubt if there are many men of real worth who would care to defy the united voice of the profession in such a matter.

PERISCOPE.

NEWS AND MISCELLANY.

The Officers of the National Confederation of State Medical Examining and Licensing Boards for 1897 are as follows: President, William W. Potter, New York; Vice-Presidents, Charles A. L. Reed, Ohio, and J. N. McCormack, Kentucky; Secretary and Treasurer, A. Walter Suiter, Herkimer, N. Y.; Executive Council: Perry H. Millard, St. Paul; Joseph M. Mathews, Louisville; William S. Foster, Pittsburg; Hugh M. Taylor, Richmond; James M. Hays, Greensboro, N. C. The seventh annual meeting of this confederation will be held in the small banquet hall of the Hotel Walton, at Philadelphia, Monday, May 31, 1897, at 10 A.M. The following program has been arranged: I. Address of welcome by A. H. Hulshizer, of Pennsylvania State Board of Medical Examiners. II. Response by Vice-President Reed. III. Report of the committee on minimum standard of requirements. IV. Discussion and action thereon. V. Report of the secretary and treasurer. VI. Annual address of the president. VII. Some practical experience with, and results of, the medical law of Pennsylvania, William S. Foster, Pittsburg. VIII. The need for exact information as to the equipment, methods and requirements of our medical schools, J. N. McCormack, Bowling Green, Ky, IX. Address by Prof. J. W. Holland, M. D., Dean of Jefferson Medical College, Philad'a. X. Paper. XI. Miscellaneous business. XII. Election of officers. XIII. Adjournment. The object of the confederation is to consider questions pertaining to state control in medicine, and to compare methods in vogue in the several states; the collection and dissemination of information relating to medical education, and to consider propositions that have for their purpose advancement of the standards in the United States. A cordial invitation is extended to all members and ex-members of state medical examining boards, and to physicians, sanitarians and educators who are friendly to the objects named, to attend the meeting and participate in its proceedings.

Recommendations adopted by the Medical Association of the District of Columbia, February 16, 1897:

I. That every institution for medical charity shall require from every applicant for relief in a Hospital or Dispensary, a written certificate to be obtained as hereinafter provided. Emergency cases are to be excepted from the operation of this rule.

II. That such certificate be obtained from Physicians to the Poor, the Board of Associated Charities and any registered physician.

III. That cases of sick and injured persons found upon the streets, in the stations or elsewhere, who require immediate treatment, shall be carried to the Emergency Hospital, or the nearest Hospital having an Emergency Service, or to their homes, if so directed by the patient or his friends.

IV. That Emergency Patients shall not be detained longer in such Institutions than the necessity of the case imperatively demands, but shall be discharged from the service and sent to their homes, or to some public hospital, as the patient may elect.

V. That members of this Association shall be

entitled to the privilege of attending private patients occupying private rooms in any of the public hospitals of this city.

VI. That in future the members of the Medical Staff of Hospitals, when attending medical or surgical cases in private pay-rooms, shall insist upon proper payment for their services, except in the case of such patients who are clearly unable to pay for same.

VII. That, whenever the Medical Staff, or a majority thereof, of a Hospital or Dispensary resigns, and when, after due hearing, this Association finds that the resignations were for just and sufficient cause, it shall be forbidden for any member of this Association to accept a position on the Staff of said Hospital or Dispensary.

VIII. That whenever one or more members of the Medical Staff of a Hospital or Dispensary are dismissed, and when, after due investigation, this Association finds that such dismissal was without just and sufficient cause, it shall be forbidden for any member of this Association to fill the vacancy created thereby.

IX, That complaints made under Rules VII and VIII shall be made in writing to the Standing Committee, which, after due consideration, shall report its findings to the Association.

Ominous Symptoms in Smallpox.—According to Dr. Llewellyn Eliot (*Virginia Medical Semi-Monthly*), there is a peculiar smell in this disease which often aids in the diagnosis. It cannot, however, be described, and it is not always present. There are certain omens about this class of patients which, while they are not assured and invariable in their appearance, are, he says, of very grave prognostic import. For instance, Dr. Eliot has always noticed in moving a patient to the hospital, that those who voluntarily covered their faces and heads, without any suggestion to do so, invariably died. When the face of a white patient assumes a dark, leaden hue during the first days, death may be predicted almost with certainty. Those patients who presented great swelling of the face and head in the beginning always suffered from severe attacks. There is a peculiarity of the walk which is very ominous; the patient lifts the feet high, as if he were ascending stairs, and this applies to the early eruptive stage.

Investigators with the Roentgen ray, in turning it upon the diaphragm during an attack of asthma, say that the right half stops working, leaving the left half to do all the work. —*Medical Times.*

The vomiting of pregnancy can always be relieved by a 20 per cent. solution of menthol in olive oil, given in ten-drop doses on sugar, says Dr. Weil in *The Practitioner.*

Sponges, owing to the impossibility of destroying germs in them, have long since been banished from the surgeon's table, and should also be excluded from the bath-room and washstand, says Prof. Lang, of Vienna.—*Medical Times.*

The Whale Cure for Rheumatism is thus reported in the *Dublin Journal of Medical Science:* "It is reported that, at the town of Eden, a place in Australia which stands on the shores of Twofold Bay, there is a hotel where rheumatic patients congregate. Whenever a whale has been taken the patients are rowed over to the works in which the animal is cut up, the whalers dig a narrow grave in the body, and in this the patient lies for two hours as in a Turkish bath, the decomposing blubber of the whale closing around his body and acting as a huge poultice."—*The Medical Record.*

Our readers are probably already aware of our opinion of Don'ts. We have always believed that if we knew what to do we would certainly know what not to do. However, when a person itches for notoriety, and is not competent to know what to do in certain cases, we would not blame him for satisfying his ambition by his harmless and useless effort in telling us what we should not do. Each surgeon should be familiar with three Don'ts:

Don't forget to get a patient before operation.

Don't forget to have him present at the operation.

Don't forget to have a long account of the operation in the daily press.—*Atlantic Medical Weekly.*

While all the world is sneezing and coughing with more or less grace and vigor, it is not surprising to find a large portion of the medical world agitated over the question as to the best way of taking cold, whether there is more chance of doing so by going from a warm to a cold atmosphere, or the reverse. In attempting to decide the question we are reminded of the report of the discussion of a debating society which we once saw in a country newspaper. It was as follows: "The question for discussion was, 'Who leads the happier life, the farmer or the inhabitant of the city?' The question was decided in the affirmative." We decide our question also in the affirmative. —*The Hahnemanian Monthly.*

An unusual fetal position is given in *The Medical Press and Circular* by Mr. Arthur Cary, of Weston-super-Mare. The labor was prolonged and was in the seventh month of pregnancy. The presentation was vertex and the infant lived twelve hours after birth. Mother had one full-term child born thirteen months before, and had enjoyed good health till about five weeks prior to this confinement, when she was lifting some heavy weight and suddenly felt "something give way." Uterine prolapse followed, but not very severely. At the birth the head was born with the feet lying on either side of the face; then followed the body with the arms fully extended to the buttocks, on which each hand was more or less spread out. The accoucheur does not remember having seen or read of such a position, and thinks it might be of interest to obstetricians.